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THE THREE GIFTS OF LIFE

NELLIE M. SMITH

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THE THREE GIFTS OF LIFE

"Women can do three things to help the race progress; seek the best in themselves, demand the best in men, and teach little children how to use their gift of choice."

THE THREE GIFTS OF LIFE

A GIRL'S RESPONSIBILITY FOR RACE PROGRESS

BY

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INTRODUCTION

Young people to-day are more fortunate in many respects than those who lived at earlier periods in the world's history. For girls and young women especially, life at the present time offers more opportunities and advantages than ever before. They have more freedom and independence in the home, in the school, in office, store, shop and factory; in social life, in work, and in play.

Enlarging freedom and opportunity in any sphere of life mean increasing responsibility; and to meet this is needed correspondingly broader intelligence, clearer mental vision, and sounder judgment which shall be sufficient to all the situations which may arise. To meet then this suddenly widening life which is opening to them, girls need much new knowledge and new wisdom.

These modern and varied opportunities of-

fered to the girl do not relieve her in any way from the fundamental and essential responsibilities which have always belonged to womankind. Of all human institutions, the home is still the most important. By far the most valuable part of the work of the home belongs to the girl, the woman, the mother. All the conditions in the home or outside of the home which affect the welfare of the girl; her health, her character, her personality, her womanliness; are of vital importance not only to herself but to human society as a whole and to the human race indefinitely.

The essential womanly virtues and qualities then which have been esteemed so highly in the past are just as important to-day and just as necessary to true womanhood as they ever were. They find some unusual expressions and applications in the new and broader sphere of the present time and in many ways their cultivation and preservation are more difficult and uncertain now than they were when the life of the girl and woman was more restricted and better protected.

To the girl of to-day often comes at an

early age the necessity for making her own way in the world. To support herself partly or entirely; sometimes to support or help support other members of her family is the task set before her. Whether she joins the great army of self-supporting young women or not, the girl always has the privilege and the duty of guarding and conserving not only the physical, mental, social and moral values but also the special attributes and qualities which belong to true womanhood.

The most important contribution which any girl can make to the human race is to realise within herself and to exemplify before the world the finest possible spirit of womanhood which always includes the spirit of the mother. Whether she attains sometime wifehood and motherhood or not, every girl should appreciate her responsibility for being a fine, true and helpful woman.

If the girl is to do her full share in the responsible work of the world to-day, she must understand better what life means. She must understand better her duties to herself, to her home, to her girl friends, and to the

boys and young men with whom she associates. She should appreciate also the importance of these present duties in relation to the future and larger tasks which life may bring to her. She will understand in this way and in some measure, how far the well-being and happiness of others are dependent upon her own life. And through this understanding of what her life and conduct may mean to other lives, she will gain the strongest incentive to fine thinking, fine feeling, and fine conduct.

If our human world is to be made better in ways which seem so vitally and imperatively important, there must be more intelligent and devoted mutual helpfulness between boys and girls; between men and women. A high equal standard of morality for both sexes means not only that girls must maintain a fine plane of thought and conduct for themselves, but that they must help their boy associates to attain a correspondingly high type of morals.

To accomplish this it is necessary that girls should appreciate more clearly the influence of their personality and conduct upon the

thoughts and emotions of their boy companions. They should guard more thoughtfully and conscientiously the effect upon their boy friends of influences about the nature and results of which most girls are too commonly ignorant, or careless, or both. The more attractive a girl is to her boy acquaintances, the more important it is for her to realise the power of her influence and to appreciate the fact that her qualities of attraction are gifts to her for the use of which she will be held accountable.

The knowledge and conscience relating to these serious phases of life should not lessen or darken any of the wholesome joy and gladness of youth; and this will not occur, with a rational growth of intelligence and sense of responsibility coming naturally and gradually through the years. On the other hand, such an adequate development of the girl into requisite understanding is the surest guarantee of the highest usefulness and happiness through a lifetime.

It is important to remember also that this education of the girl which takes account of

all the fundamental gifts and obligations of life, will not be effective unless it enlists the finer emotions; the religious feeling as well as the intelligence of the individual; unless it appeals to the heart as well as to the mind; unless it stimulates in the girl the spirit of the finer altruism and inspires her to subordinate her own desires as far as may be necessary to the welfare of others, and to find her highest and truest happiness in practical devotion to human ideals.

In these days when the high cost of living is so often not only a pressing but an oppressing problem; when the thought of people is occupied so much with dollars and cents; when popular judgments seem so largely commercial and materialistic, it is important to remember that most of the genuinely best things in life cannot be obtained simply or directly by money. Among these best things are health, character, honour, courage, patience, cheerfulness, unselfishness and common sense.

Many of the most valuable possessions in

life then are within the reach of every person who is reasonably intelligent and earnestly devoted to an unselfish ideal.

There is peculiar need at the present time of teaching and literature which will in clear, tactful and thoroughgoing manner help the girl of to-day to realise the best of her gifts and of her opportunities; to attain the most effective influence and the highest happiness of which she is capable. This instruction should help the girl to understand the meaning of life, of reproduction, and of parenthood. It should help her to appreciate the beauty, the privilege, the obligation of motherhood. She should be prepared not only in strength and purity of body, but of mind and character for the peculiar responsibilities of womanhood. She should understand the great laws of life as illustrated in the world of nature and appreciate the influence of these underlying principles upon the plants and animals and also upon human beings. She should also understand clearly how the human being may rise above the limitations of na-

ture and control the creature instincts so that they may enrich and ennoble life in every way.

Many of the books which have attempted to instruct girls with reference to reproduction and parenthood have contained too many technical, scientific facts, or too much sentimentality, or too much information about disease. The book in this field should give in a clear manner, accurate and well-balanced information most useful to the maturing girl. It should give her the specific knowledge and guidance she needs to enable her to live safely, wisely and helpfully in her actual world. It should appeal to the conscience and stimulate the enthusiasm in ways which will most effectively inspire the girl to admirable living and the most useful type of social helpfulness.

THOMAS DENISON WOOD.

THE THREE GIFTS OF LIFE

CHAPTER I

PLANT LIFE

THERE is always something interesting in living things. I think it is because there is ever something new and wonderful to see. No living thing is ever exactly like any other living thing, neither does any living thing remain always the same. There is a constant change.

I am going to tell you the story of life and of the three different gifts that have been given to living things. I want you to see life as a whole, and to understand the big broad meaning of it; why there is a constant change; why one kind of life differs from another; and how it is that some living things have progressed so much farther in life than others.

Plants and animals are living things, and very different from lifeless things such as stones, or water, or air. A living thing can do something that a lifeless thing cannot possibly do; it can grow.

A lifeless substance can become bigger by simply adding more of the same substance to it. If you put a good many cupfuls of water into a pail, by-and-by you will have a pail of water. But a living thing gets bigger by taking outside substances called food, and water, and air, and building them up into itself; or in other words, by growing. That is the great difference between living things and lifeless things. Living things have the power to grow; while lifeless things have not.

Not only do living things grow in themselves, but they produce new life like themselves. The apple-tree bears apples. Inside the apple are seeds. If you plant one of these seeds in the ground, you will get another apple-tree, which in time will bear apples.

Lifeless things cannot do this. If a man wants corn, he plants the seeds of corn in the ground; but if he wants watches, he cannot get them this way; he must make the different parts and put them together.

Not only do living things have the power to grow, but they *must* grow, if they would

keep on living. A living thing that doesn't grow will either be cut off from the best things in life, or it will die. That is a law that everything that lives must obey.

Just as in a nation or a city there are laws which have been made for the good and protection of the people, and which the people must obey, so it is in life. Those people that obey the laws, get only good from them. It is only those that disobey that get into trouble. The bigger the law they break, the more trouble they find themselves in. They may be shut up in prison for a time so that life is very much cut off and restricted; or they may be locked up for the rest of their days, away from everything that makes life full and desirable; or, if they have done a very great wrong, they may even have their lives taken away altogether. So it is in life. Those living things that obey the law and grow, continue to live; while those that disobey it must be punished, either by having their lives greatly restricted, or by losing them altogether.

When you hear the word *grow,* you do not

think of getting smaller and poorer, or of remaining the same. You always think of becoming bigger and finer. That is the real meaning of the word. If you look in the dictionary, you will find that growth means advancement, or progress. That is just what life has been doing for thousands of years; it has been progressing, or advancing. In other words, it has been moving on and up.

When first life began on this earth, it was very simple. There were no beautiful flowers and birds and animals and people as there are now; just a few tiny specks living in water. Gradually, very gradually, these developed into higher and still higher forms; until the earth was filled with all kinds of wonderful life as we see it to-day. As we learn the story of the way life has developed through the ages of time, we see that it has been constantly changing from simple to complex forms; from plain to very beautiful; in other words, that it has progressed.

Although life as a whole has made great progress, some forms have remained in different stages of development. Some kinds

of life have advanced much less than others; while there are some that have made no progress at all, and are still little formless specks floating in water; so small that you must use a microscope if you want to see them at all. These tiny specks are alive, but that is about all. Because they have made no progress, they have been shut off from all that is beautiful and good in life beyond a mere existence.

The great law which all life has been obeying through the centuries since it first appeared on the earth; the law which it must still obey if it would continue to live so as to get the most out of life, is *progress*.

Life has been progressing in two directions; first in the individual, and secondly in the race. The progress made by the individual is important; but more important still is the progress of the race as a whole. This race progress has been helped in two ways; first by mating together of the best individuals so that the young may be better, if possible, than the parents; and secondly by the care and protection which living things give to their

young in order that they may have a chance to live and grow.

As you all know, life on our earth is of three different kinds; plant life, animal life, and human life. These three kinds of life are alike in certain ways, but in other ways they are very different. I have just spoken of the ways in which they are alike; they all take outside substances called food and water and air, and build them up into themselves; they all produce new life like themselves; and they all must obey the great law of life and progress in order that they may live and get the most out of life.

Now about the ways in which they are different; for they are very different in a great many ways. In fact, I think we are so used to looking at the differences between plant life and animal life and human life that we forget to notice how many things all life has in common. One of these things is that all life must obey one great law, the law of progress. The differences in life come from the ways in which they obey this law.

Three different gifts have been given to

living things. It is by means of these gifts that living things have obeyed the law and progressed. Plant life has only one gift, and that only a very simple one; therefore plants have not progressed so far as animals have. Animal life has two gifts; the second much finer than the first. Animals can do many things that plants cannot do, such as running and swimming and flying; all because of the second gift. Now human beings are higher than either plants or animals. This is so because human beings have three gifts. The first they share with the plants, the second with the animals, but the third and best of all they have alone. It is by means of this third gift that human life has progressed so much farther than either plant life or animal life. The differences between plant and animal and human life come, after all, as a result of the differences in the gifts which they have been given.

But each kind of life varies greatly in itself. There are many different kinds of plants, and many different kinds of animals, and people also are different from each other.

I believe this comes, to a large degree, from the different ways in which different individuals have made use of the gifts which they have received.

The first gift which was given to life, by means of which it could obey the law and progress, and the only one of the three gifts which plant life has, is *dependence.* Plants being fixed in one spot must depend upon outside help in order that they may live and grow. Perhaps you think this a very plain simple gift. Yes, it is the simplest gift of all; and yet it is by means of *dependence* that plants have made such wonderful progress and have grown to so many beautiful and useful forms.

Every girl loves flowers, but I wonder how many of you know how they came to be so beautiful or smell so sweet, or why they grow at all! I am going to tell you the story of the flowers and the way they have progressed by using their one gift, *dependence.* See if you don't agree with me that it is more wonderful than any fairy story you ever heard, besides being all quite true. Then you will

love flowers more than ever because you will understand them.

I have not time to tell you how plants eat and breathe and grow, but I want to tell you how they produce their young and what care they take in order to obey this law.

Break open this peanut. Take off the outside skin, and then carefully break the nut in half. Do you see in one corner a tiny bundle of leaves fastened to a small nub? That is the young peanut plant. Of course, this little plant is quite dead because the nut has been roasted; but if you could get a fresh nut, and plant it in the ground under the right conditions, that little bundle of leaves would swell and grow into a new peanut plant. The little bundle of leaves tucked away between the halves of the nut is called the embryo. An embryo means a life at the very beginning of its existence, before it has developed into the form it will take later on.

Now take the embryo plant out. It is only a small part of the whole nut. Can you guess what the rest of the nut is for? Why that is the food stored up for the use of

the embryo plant until it grows large and strong enough to get what it needs directly from the earth and water. The embryo plant surrounded by food, all wrapped snugly in a skin or shell, is called a seed. There are many, many different kinds of seeds, such as beans, and peas, and rice, and nuts, and seeds of flowers and fruit. They all have embryo plants tucked away in them, but some of them are so small you can scarcely find them.

The plant cannot care for its young tucked away in the seed the way the animal can care for its little ones. The plant must depend on outside aid to help it out. So in the plant world there are all sorts of ways of protecting the seed from harm and of giving the little embryo plant a start in the world. See, here is a chestnut, carefully tucked up in a cradle lined with down but covered on the outside with a prickly burr so that the squirrel won't touch it. The pepper stores its seeds away in a cradle that is so hot to the taste that most animals prefer to leave it alone. The peach surrounds its embryo plant with a very

hard shell, in fact so hard that we speak of it as a stone.

It is to the advantage of the new plants to start life at a distance from the parent where perhaps there is more room or better soil. Plants have many different and interesting ways of bringing this about. Some depend on the wind to blow the seeds away, while others depend on animals to carry them to some distant point. The maple tree fits a pair of gauzy wings to its seeds which are then easily carried away by the wind. The thistle and dandelion and milk-weed fasten the seed to the bottom of a feathery substance, and when it is ripe, off it goes floating through the air. Some plants fasten their seeds to what we call a burr, or sticker, which catches onto the coats of animals, or the clothes of people, and so is carried to a distant place. I don't believe you could ever guess why the apple and orange and grape and many other fruit seeds are buried in the centre of the fruit. Why that is just a beautiful luscious cradle for the little embryo plant tucked up inside the seed; put there on pur-

pose so that someone will eat it and then throw away the seeds, far, far off from the tree where they grew. The same is true of the peach and the plum; only in these fruits the seed is enclosed first in a hard shell so that it may be the better protected from any harm. In berries, like the strawberry and raspberry and blackberry, the plan of working is more curious still. The seeds are small and set in the pulpy juicy part of the fruit which is good to eat. The birds eat the fruit but swallow the seeds whole. They pass through the body of the bird undigested and out onto the ground again where they can get a chance to grow.

You can see how dependent plants are on outside aid in order that their young may have a chance to start in life. Those plants having the best contrivances are the ones whose young will be most likely to have an opportunity to live and grow. The seeds attached to feathers or sails will be carried off by the wind. Animals will be attracted to the best fruit, and their seeds will be scattered on the ground. So that, in the long run, the

plants that have made the best use of their gift, *dependence,* are the ones whose young have had the best start in life and have progressed.

Of course, many more seeds are produced than ever get a chance to grow at all. Many are lost, and many more are eaten; for the principal food of men and of animals consists of seeds. Wheat that is ground into flour, oats that horses eat, corn, peas, rice, beans, and many other things we eat, are just seeds of plants. Although so many seeds are used for other purposes, always some fall on the ground where they get a chance to sprout.

As the little plant grows, it spreads its roots deeper and wider into the earth, and the branches and twigs hold the leaves into the air where they can get the sunlight; for the plant must have air and food and sunlight, just the same as animals and human beings, if it is going to live and grow. If you put a plant where it can get no water, or if you shut it in an air-tight case where it can get no air, it will die just as an animal would under similar conditions. If put in a dark place and

kept there, it will grow pale and sickly, and if kept there long enough, it will finally die. But plant it in good soil where it can get all the water and other material it needs, and plenty of air and sunshine for its leaves, and it will grow big and strong, and by-and-by, besides leaves, we shall find little flower buds which will unfurl into the flower borne by this particular plant. This may happen in a few weeks after the seed has been planted, as is the case with the pea and the bean; or it may not be until the following year, or even several years, as it is with most trees.

A plant lives its whole life for its flowers. If it could think and talk, it would tell us how roots and stems and leaves all work together so as to produce the finest flowers. There is a reason for this, for it is in the flower that the new little plant is born. That is what the flower is for; in fact, that is the only reason the plant bears flowers at all; for as soon as the embryo plant awakens into life inside the seed, the petals droop and fade and we say the flower is withered. You see, after all, the flower was made not for our en-

joyment primarily, but as a home for the future plants to start life in.

There is a very interesting fact connected with the coming to life of the little embryo plant. It requires two different parts of the flower to bring this about. The flower cannot bear seeds unless first these two parts are brought together. I like to think of them as half-lives because it always takes two halves to make a whole; and the life of the plant cannot come into existence from just one part, but must wait until the two are united.

The half-lives live in the parts of the flower which are called the organs. You know we speak of the organs of the body as those parts which have some particular work to do, such as the heart, the stomach, and the lungs. The particular work of the organs of the flowers is to produce new life, therefore they are called the reproductive organs.

There are two kinds of reproductive organs; the male organ and the female organ. The male reproductive organ produces male half-lives which are called sperms. The female reproductive organ produces female half-lives

called ova, which is the Latin word for eggs. If left alone, these half-lives are of no possible use and will never come to anything; but if an egg and a sperm are brought together and unite, they form a whole life which has the power, under the right conditions, to develop into an embryo plant and later grow into a new plant like the parents.

All plants, except a few of the very lowest forms, have both male and female organs. You can usually find the reproductive organs of the flowers without much trouble, especially those of the wild flowers.

The female organ starts at the base of the flower near where the petals join the stem. This part of the organ is called the ovary, for it is in the ovary that the ova, or eggs, containing the female half-lives are born. From the ovary proceeds a slender tube having a smooth, sticky ending. In the Easter lily there is so much of this sticky fluid that I have often seen it gathered into a big drop at the end of the tube. Some flowers, such as the Easter lily and the tulip, have only the one female organ right in the centre of the

flower. In other flowers there are several slender tubes starting from the ovary and extending upwards in the centre of the blossom.

The male reproductive organ is quite different. Usually there are more male organs than there are female. You can tell them by the yellow powdery stuff lying loosely on the top when they are ripe. It is the yellow powder that comes off on your nose when you smell some flowers. In the Easter lily there is so much of it that it drops off and stains all the pretty white petals; so that some people pull off the little yellow heads before they have become ripe. The yellow powder is called the pollen. It is kept shut up tight in a powder-box on top of a stem until it is ripe; then the box opens and the pollen which is dry and easily shaken off, clings to anything that touches it. Tucked up safely inside the pollen, are the sperms or male half-lives.

When the pollen falls onto the sticky ending of the female organ, it is held fast. Immediately the little half-lives leave their yellow powder nests and go chasing down the

tube to the ovary where the other half-lives are waiting for them. When the two half-lives come together, they form a whole, and the embryo plant begins its life. Now the petals droop and die, and the seed becomes larger and more perfect, while the little embryo grows bigger and stronger, fed always by the parent plant until it becomes quite able to start life by itself. Then we say the seed is ripe. The apple or nut falls from the tree, the strawberry is ready to eat, and the thistledown blows away looking for some new home for the embryo plant to grow up in.

But there is a puzzle in the life of the flower. How do you suppose the yellow powder gets onto the sticky end of the female organ? No, it doesn't just fall on, except in a very few cases. That is an easy guess, but it isn't the right one. It couldn't be for three different reasons. In the first place, most flowers have male and female reproductive organs, but some have only male organs while others have only female. Some kinds of plants and trees have flowers bearing only male organs and others have flowers bearing

only female organs. In the next place, very many flowers have both male and female organs, but they ripen at different times, so that when the end of the female organ is sticky and ready for the powder, the powder-box is still green and shut up tight. Or perhaps the powder is ready for use, but the female organ is not moist and sticky and ready to receive it until after the yellow powder has all fallen off or blown away. In still other flowers, the male and female organs grow in such a position that the pollen couldn't possibly fall onto the end of the female organ. You see, if the plant could think and talk, it would say, " I don't want the two half-lives of the same flower to unite; because the new little plant is not likely to be so fine and perfect as it will if the half-lives of two different flowers, or better still, of two different plants are brought together."

But how do the half-lives of two flowers on different plants come together so as to form the new plant life? That is the wonderful part of my story. Plants cannot walk about freely like animals, nor fly like

birds; they must depend on something else to bring the two half-lives together. Plants are very dependent. Since they are by their nature fixed in one spot, they cannot seek what they need by going for it and hunting until they find it, but must wait patiently where they are until it is brought to them. If there is no rain, or no water is brought to them, they must go thirsty. If the soil is poor they cannot move to where it is better; their lives must be poor and stunted in consequence. The best they can do is to gain outside help in sending their seeds to a different and perhaps a better place. So it is with the coming together of the half-lives. The flowers must wait patiently and depend on something else to bring them together. This is done in several different ways, but the most interesting way is by means of the little honey-bee.

The bee does not know what a splendid service she is rendering to the flowers. She is not a philanthropist, but just a very good business woman. She is busy gathering honey to take back to the hive. She flies from flower

to flower, getting just a taste from each one. When she lights on a flower and sticks out her long tongue to get the honey, she knocks against the powder-boxes and gets the powder all over her head and feet. Then off she flies to the next flower; and while she is busy in that one, some of the pollen containing the half-lives brushes off and falls onto the sticky end of the female organ. From this flower the bee gets more pollen and off she goes to the next carrying the half-lives with her. But if she goes to two different kinds of flowers, what happens then? As a matter of fact, a bee usually takes one kind of flower at a time from which to gather honey; but if she should go to two flowers that are quite different, the half-lives would not fit together, and the pollen would not be of any use. It seems almost as if the plants knew how dependent they are on the bees for the lives of their young, for they offer all sorts of inducements to get them to come. They surround the organs with beautiful, coloured petals. You might call these the bill-boards to attract the bees' attention. They breathe

fragrant odours for the same purpose. Then they must be sure to keep a supply of honey on hand, for if they did not, the bees would very soon learn to leave them alone, and their half-lives would never be brought together.

Not only do bees carry the pollen from flower to flower, but so also do butterflies and other insects, and some birds, such as the humming-bird. There is a kind of moth that works at night. The flowers which it visits are white, because that colour can be seen so much better at night than any other. Then too, they have a very sweet odour, so that the moth can know they are near even before she can see them. Some flowers, such as the honey-suckle, have a sweet odour in the day-time, but when night comes it grows very much stronger. So you see, both the beautiful, coloured petals and the fragrance of the flowers are made, not for us alone, but for the purpose of attracting the insects that are the means of bringing the half-lives together so that new plants may be born.

Another interesting thing is that each flower

has some particular insect to please. So it adapts itself to her taste. The flowers that are visited by small flies and other insects with only short tongues, keep their honey near the surface where it can be reached easily; but the flowers that are visited by the butterflies, keep their honey deeper down. The butterfly has a long tongue and can reach down and get it, while some of the other insects can't reach it at all. The nasturtium, whose flowers come in so many beautiful shades of red and yellow and orange, keeps a good supply of honey in a special closed tube or honey pot which is there just for that purpose. Not only that, but it marks the way to the entrance of the honey pot by lines on the petals pointing towards it, just like so many sign posts.

Just think how much work the bees and butterflies and other insects have to do in order to bring the new little plants to life! Each blossom on the apple and peach and pear and other fruit trees has to be visited by the bees. Each tiny half-life in the female organ must be made full and perfect by union with the half-life from the male organ or no fruit

will form. The flower will break off and drop to the ground useless.

I think you will readily see how wonderfully the flowers have made use of *dependence* in getting their half-lives brought together. They could not possibly bring this about by themselves unless the two half-lives in the one flower were united, and this would hinder progress. So they used their one gift in getting the needed help from the outside. If there are more flowers than the insects can visit, the poorer ones will be passed by, while those blossoms will be picked out which are the most attractive and which pay the most liberally with honey. So that, in the long run, it is the better flowers that have their half-lives brought together and that continue their lives in those of their young. They have obeyed the law of life and progressed, and their reward has been more life.

There is a large class of plants that do not depend on insects or birds in order to have their half-lives in the pollen carried from one plant to another. These include many of the trees as well as grains, such as wheat, and corn,

and oats. These plants depend on the wind to carry the pollen from one flower to another and thus bring the half-lives together. But the wind has no favourites and serves all alike; therefore the bright coloured petals, and the sweet odours, and the supply of honey, by means of which many flowers get the insects to come to them are no longer needed. You will probably say that these plants do not have flowers at all. To be sure they do not have what we call flowers. They are not so very attractive, as they have no pretty petals and no sweet odour; but they are really flowers because they have the principal parts; the male and female organs. The male organ is similar to that in other plants; a powder-box on top of a stem; only the stem is very easily shaken. The female organ has the ovary at one end containing the little half-lives. The free end is well exposed and so formed as to catch the powder easily as it is blown against it by the wind.

Since these plants depend on the wind to carry the pollen from one plant to another, they must supply very, very much

more than is needed, because much will be lost. The flowers of many of these trees and grains mature in the spring when we have so many windy days. The powder-box hangs out loosely. When the pollen is ripe and dry, it is easily swept along in the air and is caught and held on the end of the female organ. If it is the right kind, the half-lives go down the tube to the ovary until they reach and unite with the half-lives that are waiting there for them. But if it is not, if it belongs to some different kind of plant, it simply falls off again and is lost.

One of the most interesting examples of this method of bringing the half-lives together is found in the sweet corn we all like so well. The cob is the female reproductive organ. Where each kernel of corn is going to grow is the little female half-life. Out from each of these places goes a long slender tube which we call corn silk. The whole is carefully wrapped in green leaves with the silk hanging out of the top. At the top of the corn-stalk grow what are called tassels, but which are really flowers bearing the male reproductive

organs. When the pollen is quite ripe and dry, the wind blows it about so that it falls on the silk. Down every long slender tube of silk must travel a male half-life to unite with the half-life waiting at the other end. Then the little plant is born and begins to grow inside the seed, the two half-lives together surrounded by food material forming the kernel of corn. The next time you strip an ear of corn and pull off the silk, think what had to happen in order to make the ear with every kernel perfect! In case there are a few kernels, or perhaps a few rows all shrivelled and unformed, you will know it is because something happened to prevent the two half-lives from coming together. Nature is lavish, but she is not wasteful; so that a seed will not develop full and perfect unless there is a perfect life within, capable of developing into a new plant.

The plants that are dependent on the wind for bringing together their half-lives have made use of their gift, *dependence,* in several different ways. In the first place, they supply a large quantity of pollen because much will

be lost. Then the pollen is ripened at a time when there are likely to be windy days. The flowers of many of these trees develop before the leaves, so that the leaves won't be in the way. Finally, often the flowers, and sometimes the whole plants, are long and slender and easily shaken and swayed in the wind, so that the pollen is readily blown away by the wind, and as readily caught on the end of the female organ as it is swept by the breeze.

There is one other way in which plants have been progressing by means of their gift, *dependence,* and that is through the help of men. When farmers plant seeds they take the best they can get, so as to grow the best fruit and flowers and vegetables that they can. Very often when one farmer has grown something particularly fine, he will save the seeds and share them with his neighbours, so that the next year their crops will improve too.

Some men, called plant-breeders, who are trying to see how beautiful they can make flowers, and how they can improve fruit, will take a little of the pollen from a very fine flower, or one belonging to a particularly choice

plant, and put it on the end of the female organ of another flower selected for that purpose. Then they take care of the seed which grows and plant it carefully. They repeat this, over and over, selecting the best from hundreds of plants, until they get plants with finer flowers or fruit than either parent had from which they came. We can say that a man who does this is simply working with the law of life and helping to make it operate. One man named Luther Burbank who lives in California, spends all his time in doing just such things as this. He has devoted his whole life to improving certain fruits and flowers and vegetables and trees. He has had some very wonderful results; so wonderful that people come from all over the country and even from Europe to see his farm where he grows these plants. Many of the finest fruits and flowers in the world have started life on his place and by his hand.

Now that you know the wonderful story of the flowers, I believe you will love them more than you ever did. When you have a flower, look for yourself and see if you can

find the reproductive organs I have told you about. They are hard to find in some flowers; especially the cultivated ones, but in many wild ones they show quite plainly.

There are just three things that I should like to have you remember from this talk. The first is that all life must obey a law if it would live so as to get the most out of life. It must progress. The second is that there are different kinds of life, some kinds higher than others. All life must obey the law, but the different kinds of life have received different gifts by means of which they can obey the law and progress. The higher the kind of life, the more and the finer the gifts it has been given, the more perfectly it can obey the law, and the farther it can progress. Finally, plant life is the lowest of all forms of life, for it has been given only one gift, and that the simplest one of all. This gift is *Dependence.*

CHAPTER II

ANIMAL LIFE

IN my last talk I told you about some of the ways in which the plants have obeyed the law of life and have progressed by the use of their gift, *dependence.*

To-day I am going to tell you stories about some of the animals, and show you how they too must obey the law of life and progress, if they would continue to live and get the most out of life, both for themselves and for their young.

The beginning of animal life on the earth was like the beginning of plant life; little tiny specks floating in water. Although plants and animals in their simplest forms are much alike, they are very, very different in their higher forms.

Animals have progressed much farther in life than have plants. The plants, by means of their gift, *dependence,* have grown strong and beautiful and useful. The animals have done this too, but they have done much more

besides. Animals are able to do certain things which are not possible in plant life. The higher the animal, the farther it has progressed in life, and the more it is able to do. Fish can swim, bees can gather honey, birds can sing and fly and build nests, while other animals can run and hunt and do many other things.

The reason for this is to be found in the second gift; the gift which was given to the animals, but was not given to the plants. This gift to the animals is a much finer gift than *dependence*. It is *instinct*. Some people call it blind instinct. They say blind because, in animals, instinct is never governed by reason or choice. It is just an impulse to act. The animal has a feeling within itself to act in a certain way. This feeling is very strong and compels the animal to do certain things. The animal cannot guide or govern its instinct. On the contrary, the instinct governs or rules the animal. *Instinct* has proved to be a very useful gift to the animal; for it has made the animal do the right and necessary thing at the right time.

An interesting thing about instinct in animals is, that the more the animal uses its gift, *instinct,* the more perfect the instinct becomes, and the farther the animal progresses. Some of the lowest forms of animal life scarcely use their second gift at all. They live by the first gift, *dependence,* almost altogether. These animals have not progressed, and as a result, they have been shut off from all that is good and beautiful in life. But those animals that have used their second gift, *instinct,* have continued to progress until in some of the higher animals, *instinct* makes them do such wonderful things, that even the most learned men, who have studied certain animals carefully for many years, cannot understand this wonderful gift nor the way in which it works; they can only admire and wonder.

Instinct shows itself in many different ways and has been given different names. It is *instinct* that makes the animal eat when it needs food, and either run away from its enemies, or fight to protect itself. There are many other instincts too, but one of the strongest and most important of them all is the in-

stinct which makes the animal do the necessary things in order that new life may be produced and may continue to live. This is what is known as the *reproductive instinct,* or, as I like to call it, the *race instinct,* because it is the instinct which makes the animal do those things that are necessary in order that life may continue to live in the race, and may not end with the death of the animal. It is about this *race instinct* in particular, in the lives of a few animals, that I am going to tell you to-day.

The fish is a stupid animal and has not progressed very far in comparison with some of the other animals; therefore we will take that first. The fish, like the plant, must grow if it would continue to live. In order to do this, it must have food and water and air. It finds all these in the water. There is always some air mixed with the water. The fish is so formed that it can get its air in that way only. If you take it out of the water, it will soon die for lack of air, because it cannot breathe as animals do that live on the land. Some fish live on plants that grow in the water, while others eat fish eggs, or insects, or smaller fish.

As the fish need food and air in order to grow, just the same as the plants do, so they create new life like themselves, just the same as do the plants. That is, they have within themselves organs containing the two kinds of half-lives; the male and the female; which, when brought together, will form into new little lives. Every male fish has within his body an organ containing male half-lives or sperms, and every female fish has the corresponding organ called ovaries which produce the ova or female half-lives. The ovaries of the fish contain thousands of eggs, as you can see when you eat the roe of shad or other fish.

I am sure you are familiar with the fish we call salmon. Perhaps you have not seen it whole, but you have eaten it canned and can remember its pretty pink colour. It has a very interesting story, and I am going to tell it; both because it is interesting, and because you will be reminded whenever you see this fish how wonderfully it has obeyed the law of life by its instinct.

The salmon are found in different parts of

the United States; but the place where they are most plentiful is along the Pacific Coast and in the rivers emptying into the Pacific Ocean as far north as Alaska. Here they are caught in great numbers and shipped to all parts of the country. It is about the salmon of the Pacific Coast that I am going to tell you. These are usually large fish; in some rivers averaging as high as twenty-two pounds. Many have been caught weighing much more than this.

The salmon are born in the fresh water streams; but as soon as they are able to swim, they start down the river toward the sea, usually reaching the ocean by the time they are four or five months old. They live from two to four years in the salt water where they get plenty to eat and grow fine and big. But when they have become fully developed, they grow restless. They feel something stirring within them which compels them to leave their natural home in the sea, and to swim up the river to their breeding places. This restlessness appears among the adult fish at certain seasons of the year, usually in the spring.

The male and female fish look alike when they are living in the ocean; but during the breeding season the males change in appearance. Their colour, which before was grey, takes on a reddish hue. The jaw extends so as to form a sort of hook, and they even develop teeth.

The salmon travel in great companies and over long distances; sometimes going hundreds of miles. They must always swim against the current of the river, often dashing through the rapids, and even leaping several feet into the air so as to get over the waterfalls.

It is while on their journey up the rivers that the salmon are caught in such great numbers. They are then in fine condition and are full of life and spirit. On they rush, not even stopping to eat, so bent are they on the one thing they have set out to accomplish. They keep right on until they have reached the shallow water of the little streams and brooks. Here where the bottom is smooth and sandy, and the water so shallow they can scarcely swim, the salmon stop. They have travelled

hundreds of miles, through rapids, over waterfalls, taking many risks, and not even stopping to eat, just for the purpose of finding a suitable spot in which to place the eggs and give their young a good start in life.

The female digs a little groove in the sand with her tail and pours into it some of the ova from her body. Then she swims away, and the male, who has been waiting near by, swims over the nest and pours from his body a few drops of the fluid containing the male half-lives or sperms. This process is kept up day and night, the fish taking turns, until all the ova have been discharged from the body of the female, and fertilized by the faithful little male. It takes about two weeks to do this.

A salmon of average size lays six thousand eggs. Instinct prompts the male to pour his life-giving fluid over the ova as soon as they leave the body of the mother, for the half-lives can live in the water but a short time unless they are united so as to form full and perfect lives.

When the salmon have finished breeding,

they are in an exhausted condition. During all this time they have taken no food, but have given freely of their life and strength. As a result, they have lost about one-third of their weight. They are quite different fish from the ones that came leaping and dashing, so full of life and spirit up to the greatest event of their lives; that of creating new lives. Worn out by their long fast, and by the process of breeding, they drift helplessly tail first down the river; none ever reaching the sea alive.

Of course, very few of the six thousand eggs ever develop into full grown fish. Many are lost, and many more are eaten by other fish; either as eggs or as young fish. But those fish that do escape their enemies leave their birthplaces in the brooks and streams as soon as they are about an inch and a half in length, and start down the river to the sea, where they live in the salt water as their parents did. They remain there growing large and fine, until they too feel the same strong impulse which will drive them back again, in most cases up the river from which they came,

in order to give their lives in turn that their young may live.

Is not *instinct* a wonderful thing that will compel so stupid an animal as the fish to travel so far, and finally give up life itself, in order that its young may have the best possible chance in life!

The story of the bees is even more wonderful than that of the fish. The salmon gives up its life in the birth of its young, but the bees do still more. They devote their lives; working early and late, in order that another bee's young may live and grow.

Bees live together, thousands of them, in a little house which we call a hive. Men who keep bees prepare a hive for them; otherwise they would have to make one for themselves in a hollow tree or stump.

There are always three kinds of bees in a hive. One bee is larger than any of the others, and is called the queen. Then there are thousands of active little bees that are called workers, and finally a few bees that do no work at all, and are called drones.

The queen is the mother of the hive. She

lays all the eggs. In fact, that is the only thing she does, and she keeps busy all the time. She ought to be called the mother bee instead of the queen. She was called the queen a great, great many years ago, because the people living at that time thought there must be a ruler to govern the hive. Now men know better, but she still keeps her name. The queen bee does nothing whatever but tend to her own business, which is to keep the hive well supplied with bees.

The queen bee does not govern the hive, but neither does any other bee; and yet the work is carried on with the greatest system and order and no confusion. There is a perfect division of labour within the hive. Each little worker bee does some particular task, and does it well. The life of the hive is governed by *instinct;* that impulse within the animal which compels it to do the work for which it was intended.

Some of the bees gather honey from the flowers, others bring in water, while many come home loaded with pollen which is made into bee-bread for the bees to eat.

Some bees get ready wax that is secreted from their bodies, and then chewed up in their mouths until it is in the right condition to work with. Then they pass it to other bees who build it up into cells which will be used; some for storing honey, others for keeping bee-bread in, and still others by the queen in which to lay her eggs.

A number of bees act as nurse girls; feeding and caring for the little embryo bees that are developing in their strange cradles. When the young bees are fully grown, their nurses clean out the cells that they have just left, and make them ready for the queen to lay more eggs.

There are always some bees stationed near the entrance of the hive to act as guards and keep away the enemies. Some bees keep the hive clean by removing refuse or bodies of dead bees.

One very interesting group of bees arranged in long lines act as living fans. They keep the air of the hive in constant circulation by the buzzing of their wings. It is said that bees can control the direction that this

current of air takes, and can also raise or lower the temperature of the hive, by the number of bees that are put to work and the amount of air that is kept in circulation.

Although there are so many different things to do, and no leader to direct the work, still there is no disorder or quarrelling or confusion; for this wonderful city is governed by *instinct,* and each little bee obeys the law.

Another interesting thing is, that during her short life, which is only from four to six weeks, each little worker bee learns all the different kinds of work. Her first duty is to act as nurse girl and to feed and tend the little embryo bees. Then she learns to mix the wax and build cells, and do the other kinds of work in the hive. It is not until she is quite a staid and dignified bee that she leaves the hive to bring in the things that are needed. Her last days are spent among the flowers gathering honey.

We have already seen what an invaluable service the bees give to the flowers. If it were not for the bees, many different varieties of flowers would die out, because there would

be no way in which their half-lives could be brought together and the life of the embryo plant be started in the seed. The bees begin their work as soon as the first flower opens in the spring, and continue until the cold weather causes the flowers to die. One cold day in March I was down in the business part of New York City buying some flowers for Easter. A lilac bush in blossom stood on the sidewalk. Hovering around were several honey bees. I have often wondered where they came from and how they knew those flowers were there.

Many of the little worker bees are busy all day flitting from flower to flower in search of honey. A bee must visit a great many flowers before she can gather a single drop. When her honey bag which holds a very small drop is full, she flies back to the hive and puts the honey in a little cell which other bees have made ready out of wax. If you have ever seen honey in the honey-comb, as it is often sold, you know what I mean.

All this work which each little worker bee crowds into her short life, is not for herself

at all, but for the larger good of the hive; and more particularly in order that the young bees that are developing from the eggs laid by the queen may have the best possible chance to live and develop.

The queen lays hundreds of eggs a day, and in the very busy season, when the sun shines brightly and there is an abundance of flowers, as many as three thousand in a single day. You can see how busy the other bees must be to keep getting cells ready for her to place them in. The queen bee is too busy to look after her own wants, even to feed herself. So several bees act as her attendants; feeding her with a special choice honey, cleaning her, and guiding her from one cell to the next, that there may be no delay in her business of egg-laying.

All the bees work except the drones. These fly about in the sunshine among the flowers, but they don't do any work, even to getting their own food. They are fed by the faithful little worker bees. The drones are the males. The worker bees are females, only their organs of reproduction have not

grown large and perfect, so they are not able to lay eggs as the queen does.

The queen bee is a worker bee whose organs of reproduction have fully developed. A hive of bees cannot get along without a queen. If anything happens to her, there is the greatest disorder and confusion until another queen is found to take her place. Therefore *instinct* prompts the little bees to prepare against such a disaster. When the hive becomes very crowded, the queen takes a part of the workers and drones, and seeks a new home, or, as bee-keepers say, the bees swarm. But before this happens, a new queen must be found to take her place. So the little worker bees break down the partitions between some of the cells, making a large cell which is capped to look like a thimble. The embryo bee which develops in this cell is carefully watched and fed with specially prepared honey; a sort of royal nectar. In fact, it is kept fairly stuffed with the best and most nutritious kind of food. In consequence it grows, and grows, developing fully in every way; so that when it finally comes out of the

cell it is a full-fledged queen with its organs of reproduction perfectly developed and ready to fulfil their function; that of laying eggs. Before the new queen comes out of her cell, the old or dowager queen, as you might call her, takes her departure followed by part of the worker bees and part of the drones, some always remaining in the hive with the new queen.

It would never do to have more than one queen in the hive at a time. This would cause as much trouble as not having any, for the two queens could never in the world agree. However, there are always several queens raised at a time; so if anything happens to one, there will be another to take her place. But the young queens are not allowed to leave their cells as soon as they are hatched, as the worker bees do. They are kept prisoners until the time is ready for them to be set free. For, were they allowed to go about freely while the old queen is still in the hive, she would rush at them and sting them to death.

After the old queen has gone, one of the little princesses is allowed to come out of her

cell and roam about the hive. If permitted, she will go straight to the other queen cells, and tearing off the covers, stab her poor little sisters to death. Often the workers guard the little helpless victims and save them from her fury; for one of these may be needed if they should by any chance lose their new queen.

For a few days the new queen wanders aimlessly about the hive; but it is not for long that she is content to live an idle life; for soon she feels stirring within herself that *instinct* which compels her to begin her life work; the purpose for which she was created. Some day when the sky is very blue and the sun is shining brightly, she sets out on her mating flight; the only time she will ever leave her hive, unless it is to swarm. For a while she lingers near the door of the hive. Then she flies off into the sunshine; only to return after a few moments as if to get her bearings. Then off she goes again.

The drones, or male bees, of her hive and of all the hives around, are flying lazily about in the sunshine. The sight of the queen bee

arouses them from their sleepy state, and sends a strange thrill of excitement through them. Off they go, chasing after her, up towards the sky. Higher and higher they fly, the queen followed by her train of suitors, the drones. After a while the weaker ones begin to drop off. Finally, one succeeds in reaching the queen. They clasp for just one moment, in which the drone places the half-lives from his body into a sort of pocket or pouch which is in the queen's body for just that purpose. But the unusual exertion which he has been under is too much for the lazy little drone; for in giving up the half-lives he loses the organ of reproduction in which they were contained, and some of his other organs as well, and he falls to earth lifeless. He has given his life for the sake of the future bees. Well can the little worker bees afford to take care of and feed him, since he makes such a supreme sacrifice at the end.

The queen now returns to the hive carrying with her all that is needed to start the new little bees in life. In a short time she begins her life work. She places in one of the cells

prepared for that purpose, a tiny egg containing a half-life from her body, together with a sperm or male half-life from the pouch where they are stowed away. The two half-lives unite and form an embryo bee which develops into a bee.

The queen bee lives for four or five years, laying hundreds of eggs a day all through the long summer months, beginning when the first little spring flower holds up its head. We are told that she lays five million eggs during her life. The little male half-lives stored away in her pocket last during all this time, so she never takes more than the one mating flight.

The worker bees store up plenty of honey and bee-bread to last their large family through the winter. The little worker bees do not have long lives, some of them living only four or five weeks, but all this time they give to caring for the young bees and storing up honey for the winter they will never see. The workers who have been born late live through the winter, and are ready in the spring to start life in the hive.

As summer is ending and the supply of honey grows less, the worker bees set upon all of the drones, either biting one of their wings so they cannot fly, or else shutting them out of the hive where they soon perish from hunger and cold. They do this as a matter of economy, so that these lazy fellows will not use up the precious food at a time when no more can be found. But the queen is kept well supplied with food. If for any reason it should grow scarce, the last drop will be saved for her.

Is not *instinct* a wonderful thing, which not only keeps thousands of bees working in perfect harmony and order, but also makes them obey the law of life, the law of progress as well; which makes the queen leave her own hive, so as to get a strong and vigorous drone from some other hive to be the father of the future bees; and which makes the thousands of worker bees care for and protect their queen, that she may do her work well while they look after the helpless young and store up food that they may have what they need for their best development!

The last animal I shall speak of is one we are all quite familiar with, the bird. Just think what a barren place this world would be if there were no birds! Even in the city we should miss the little sparrows; while the woods and fields would seem desolate without the many birds that make their homes in them.

The bird is a much higher animal than either the fish or the bee. Through long years and many, many generations, it has been obeying the law of life; gradually growing more and more perfect and gaining new accomplishments, until now, in some respects, it surpasses all other animals. A bird can fly higher and much farther than the bee or any other insect. Many animals can make some sort of noise, but none can compare for sweetness with the song of the bird. I am told that the vocal organs of even the finest singers who get thousands of dollars for a single night's performance, are inferior to those of the birds. Then, too, few animals are so clever in building homes in which to bring up their young.

During many, many centuries, the bird has been obeying the law of life and progressing, until it has gained much out of life; far more than those animals that have progressed only a little way, or than those kinds of animal life that have not progressed at all, but are still little formless specks floating in water, shut off from all that is good and beautiful in life beyond a mere existence.

As you know, most birds leave our northern climate when the weather begins to grow cold and fly south for the winter. But early in the spring, sometimes even before the snow is quite gone, they begin to come back again. After that there is a constant procession of birds flying northward until the middle of June. They travel in companies or flocks, as we call them, the same as the fish. Some birds fly very high and travel at night so as to get away from their enemies. If you look at the moon through a telescope some clear night in spring or the early summer, very likely you will be able to see a constant procession of tiny birds passing before her face.

The same instinct which sent the salmon

up the river drives the birds northward, and for the same purpose. They are coming home to the place where they were born, where the weather will soon be warm and the food plentiful, in order that they may build their nests, and breed and rear their young.

This is the bird's homing flight, for they are coming north to start a new home and bring up a family. Usually the male birds travel ahead of the female. Many of these male birds have a special gorgeous costume of bright colours which they put on in the spring, later changing to a more modest work-a-day attire. With the birds, it is the males that dress up instead of the females. But then, customs in the bird world are different from ours. Wherever they go there is a regular festival of song, for at no time do the birds sing so much or so sweetly as they do in the spring at the time of mating. As in the salmon, so too in the birds, there is a great fulness of life and spirit at the time when they are going to the greatest event of their lives; that of producing and rearing their young.

After the homing flight comes the mating. This is a most interesting procedure and I hope you will all watch for it in the spring. If you cannot go to the country, perhaps you can see it right in the city. I have watched two sparrows courting on top of a brick wall, the best place they could find. Sometimes one, sometimes two male birds seek out a little female bird. Then they flutter about and spread their feathers, always seeming to try to show off their special marks of beauty. Sometimes the little lady sits and looks on, but often she flutters back in reply, and they hop around, back and forth, as though they were going through some sort of dance. Some birds have regular antics that they go through at the sight of a possible mate. Others relieve their feelings in song. The display of feathers and antics and song excite a corresponding feeling in the little bird that is being courted. If there is more than one suitor, she naturally turns to the one that is best able to call out a responsive feeling within her breast. This is the bird with the greatest fulness of life, shown in his fine

feathers, or in his singing, or in his curious dancing and hopping about. Thus quite unconsciously she takes the best bird to be the father of her young ones, and so obeys the law of progress.

As soon as the courtship is ended, the pair set out to get a home. After finding a suitable place, they gather the material and begin to build. Sometimes both birds work, sometimes the husband builds the outside while his wife furnishes it to suit her taste. In some families, the little lady does all her own work while her mate sits on a neighbouring twig and sings to her.

Birds lay very much fewer eggs than either the fish or the bee. Most birds lay not more than five or six at a time, while some of the larger birds lay even a smaller number. Since there are so few, naturally much greater care must be taken in order that they may be saved and develop into birds.

The birds have organs of reproduction, too, just as all forms of life, only they are more highly developed than those of the fish or the bee. Probably you have seen

this organ of the chicken when it was being cleaned. If so, you can remember the cluster of round yellow balls of different sizes in the ovary. Sometimes you may even have seen a fully developed egg ready to be laid. The little yellow balls, covered only with a fine soft skin, contain the female half-lives. When these yellow balls which are the yolk of the egg, have grown to a certain size, they leave the ovary and move down a long tube where they are surrounded with what we call the white. Finally the whole is covered by a substance which hardens into a shell. All of these materials are secreted from different parts of the reproductive organ as the egg travels along on its way to be laid. Last of all, from the same wonderful organ, is secreted the colouring matter; in the cases of those birds that lay coloured or speckled eggs.

When the egg is laid in the nest, it is protected from harm by the hard shell. Inside this shell are the two half-lives; the ovum and the sperm, surrounded with food material of just the right quantity and kind to develop into a new little bird like the parents. Then,

too, there is always some air inside of each egg. You can prove it is there, and just the amount of it too, by boiling an egg hard. Then the air is all forced up to one end, making a little space between the egg and the shell.

While the eggs in the ovary are still small and covered only with a soft fine skin, *instinct* makes the father bird place his half-lives, floating in a little fluid, at the entrance of the female reproductive organ. These sperms are very active and soon find their way to the place where the yellow balls are clustered together. A tiny sperm pierces each yellow ball, and unites with the ovum that is inside; so that the life of the embryo bird has begun before the egg receives the outer coating of white and shell.

After the eggs are laid in the nest that has been prepared for them, they must be kept warm while the little life is growing and developing within. Sometimes the mother bird tends to this alone, sitting constantly on the eggs. Sometimes the father shares the duty with her; but if he does not, he brings her

food and perhaps sings to her as if to help pass away the time.

Instinct prompts the little mother to turn the eggs every day in the nest. If this were not done, the growing embryo would stick close to one end of the shell, and not be able to develop perfectly. Is it not wonderful that there is just the right material in the egg to form every part of the bird, and just enough to complete the work with none left over or wasted!

When the baby bird is fully developed, *instinct* causes it to peck a hole in the shell and come out. Then begins the busy time for the parents. The mouths are always open, and the hungry little ones never seem to get enough to eat. Back and forth fly the parents carrying food. It is said that some young birds eat as much food as the size of their bodies in a single day.

Besides feeding, the birds must protect their young from harm. Oftentimes birds will fight off intruders, even to the point of losing their own lives, that their young may be saved. Some birds, such as the

wild ducks, pretend to be wounded and go limping along if disturbed when they have young ones with them. The bird does this so as to attract the attention of the intruder away from its brood of young to itself. When it has succeeded in getting the one who might harm its young away from the place where the little ones are hiding, the careful parent will drop its limping gait, and after circling around for a few moments, go back to the young ones.

When the little birds are old enough, they must be taught to fly and seek food for themselves. The birds care for their young for a longer time than either the fish or the bee. The higher we go in the scale of animal life, the fewer young are born, the greater care must be taken of them, and the longer time devoted to their needs. When the young birds are able to get along alone, the parents separate and go their own way. The *race instinct* does not show itself again until the right time comes around to build their nests and bring up a new family.

All animals have the *race instinct.* It is

one of the strongest instincts they have and one of the most perfect. It is even stronger than the instinct for self-preservation; making the most gentle and timid animals fight if their young are disturbed, giving up their own lives if necessary, in their endeavours to protect their young and shield them from harm. It is the *race instinct,* too, that makes the males of many animals very ready to fight each other during the mating season. The strong and fully developed males drive away those that are inferior or still too young to have all their powers at their best. Thus *instinct* often causes the mating of the best animals, and makes towards the progress of the race as a whole.

In those animals that live in a wild state, and have not been influenced by contact with human beings, this instinct has become very perfect, appearing only at certain seasons and then going away until the proper time for its reappearance. Each animal has its mating season when the *race instinct* makes itself felt. Nature has so ordered this time that the young will be born when the food they need

will be most plentiful and easily obtained. Not only that, but instinct makes the parents go to that place where the young will have the best opportunity to grow and develop. It causes many fish to leave their home in the ocean and swim hundreds of miles up rivers and streams to deposit their eggs in shallow water, where they are least likely to be eaten or washed away. It sends the birds northward in the spring where they mate and rear their young just as summer is coming and there will be an abundance of food.

Will you not agree with me that *instinct* is a very wonderful thing, and a much finer gift than *dependence?* That is what has made animal life so much higher than plant life. All life must obey the law and keep progressing in one way or another; only the different forms of life are given different gifts. The higher the life, the more and the better gifts it is given. The progress of every life, whether plant, animal, or human, depends upon the way in which it makes use of the gifts which it has received.

CHAPTER THREE

HUMAN LIFE

WE have just seen what a great gift *instinct* is to the animal, and how, through *instinct,* animals have obeyed the law of life, and have made great progress.

Now we come to the life story of the human being. We too must obey the law of life, because we live, and everything that lives comes under the law. Plants and animals don't think about the law, they just obey; plants by their interesting ways of getting animals to help them out, and animals by that still more wonderful thing, instinct; that impulse within themselves which urges them on to do the things which make for progress.

I am sure you will agree with me that we are far superior to animals; more so even than animals are to plants. Human life is the highest kind of life that has ever existed on our earth. The reason for this lies in the

third gift; the gift that has been given to human beings alone. This gift is *Choice.* Human beings need not be dependent like plants, nor are they obliged to obey an instinct blindly, as animals do, but they are left free to choose. It was not until life became very high that it was given freedom to choose.

Whenever you choose, you do two things; you both think, and use your will. That is what is meant by choosing. You must think with your mind whether the thing is good or not, and you must make an effort of your will before you can do a thing that you have thought about; or, on the other hand, keep from doing it, if you think you had better not.

You can see at once how *choice* is a much finer and better gift than *instinct,* for it can rule and guide the instincts. Human beings have been given instincts too, just as animals have. It is *instinct* that makes us eat when we are hungry, and drink when we are thirsty, and get out of the way of things that might hurt or kill us. It is *instinct* too, that makes

us like to be with other people. The great difference between human beings and animals is, that animals are ruled by their instincts; they *must* obey them, for instinct is the best gift they have. But human beings can rule their instincts. Indeed, what is more, they *must* rule them if they would obey the law of life and progress. This is the more important because in human beings, *instinct* is not so trustworthy, and cannot be depended upon as it can in the animals. In human beings, *instinct* must be governed by *choice.*

Those kinds of life which have more than one gift must use the best gift, the last one given, in order to progress.

Animal life has two gifts; *dependence* and *instinct.* It is only those animals that have made use of *instinct* that have progressed; and the more they have used their instinct, the farther they have progressed. Those forms of animal life that have little or no instinct, but are just dependent like the plants, have made no progress at all, and are still tiny, formless specks floating in water.

Human beings have three gifts; *depend-*

ence, instinct and *choice.* A few people try to get along with the simplest gift of all, and are dependent upon others for everything. Some people are so easily influenced that they are never able to decide anything for themselves; but depend on anyone they happen to be with to choose for them. We call such people weak; they never amount to anything, and often do much harm if they happen to be thrown with bad companions.

But there is a much larger class who use the second gift, *instinct,* to guide their lives. They do whatever their feelings urge them to do, without using their reason to find out if it is good or not, or their wills to govern their actions. Some people get angry very easily, and often get into trouble because they have never learned to control themselves. Others like a good time and dislike to work, therefore they don't work, and become either loafers or thieves. Still others yield to many other feelings and passions, with never a thought of controlling or guiding them; until after a while they have formed a habit, so strong that it is very hard to break. These

people do not rule their lives by *choice;* on the contrary, they allow their *instincts* to rule them. Such people do not progress, but rather go backward, so that they miss what is best in life.

Progress in human life depends upon the way in which the third gift, *choice,* is used. Some people learn to use their minds more than others; they like to study and use their reason. Others cultivate their wills, and are able to control their feelings and guide their actions. It is of very little use to be ever so learned and know the best things, unless you use your will and do what you know to be good. On the other hand, a strong will power may do positive harm unless it is guided by reason. Progress in human life is dependent upon the way both the reason and the will are used; in other words, upon the kind of *choices* that are made.

As the plants have only one gift, so they have only one side to their natures, the physical, or the side of their material bodies. Animals have two gifts, and animal nature has two sides; the physical and the intellectual.

Animals have a new quality called intelligence, which is not present in plant life. Some animals have much more intelligence than others. It is those animals that have used their instincts the best that have the most intelligence; for an animal's intelligence is measured by its instinct but never goes beyond it. In other words, an animal never reasons anything out or makes a definite choice apart from its instinct. That would be using the human being's gift, *choice,* and that has never been given to any lower animal. It is by means of the second gift, *instinct,* that animal life has made such progress in intelligence.

But human beings have been given three gifts, and also three sides to their natures. Human beings have a physical side like the plants, an intellectual side like the animals, and a spiritual side which is theirs alone. Not only that, but the human being's body is higher and more wonderful than the bodies of either the plants or the animals. A human being's intelligence is far superior to the intelligence of any animal, because it is free and is not limited by instinct, as an animal's intel-

ligence is. But finest of all is the spiritual side of the human being, or the side of character. It is important that human beings should progress on all three sides, but most important of all is that they should grow finer and better in their characters; for it is on this side that *choice* can do its finest work.

Just think for a minute and see if you don't agree with me. If you are going to choose a friend, wouldn't you rather have a girl with a sweet, loving, unselfish nature, even if she were homely, and perhaps lame, and not very well educated, than you would a pretty, stylish one, who was also bright and clever, and yet was mean and disagreeable and selfish? Abraham Lincoln was noted for being a very homely man, but he was far more noted for always speaking the exact truth and for having a most tender-hearted and loving disposition. That is why the people loved him so; because he had grown so beautiful in his character.

Everyone agrees that human beings have made great progress in knowledge. People living now know much more than those did

who lived a few thousand or even a hundred years ago. We would never think of making long journeys on camels or horses when we can go by train or automobile, excusing ourselves by saying, "That is the way they used to do it; therefore it must be the best way." It was the best way then, but there are better ways now.

The same thing is true on the side of character. People used to do things which at one time were thought good, and which were the best that was known at that time; but which we have learned by experience, would not make for growth in character if done now; and yet we continually hear people excusing themselves for things they do by saying, "People have always done that way; therefore it must be all right." In order to get the most out of life, human beings must show progress in their actions, as well as in their reason.

The proper use of *choice,* so that it will do good and not harm, requires two things: first, understanding of what is right, and second, determination, or will, to do the right. The

first is acquired through the intellectual side of the human being, and the second through the spiritual. The understanding of what is right depends largely upon others. We all have to be taught in order that we may know. But the will to do the right depends entirely upon each individual person.

Many people do what is wrong and disobey the law of life through ignorance. They feel an instinct or strong desire to do some particular thing; therefore they do it without ever thinking, or perhaps knowing, that it will do harm, or that they have power to control it by their gift, *choice.*

Human beings have many different instincts; but one of the most important, and at the same time least understood, is the *reproductive instinct.* Many people have brought much harm and trouble to themselves and to others because they have felt this instinct and have allowed it to rule them. They did not understand it, nor how it could be guided and controlled by their reason and their will.

I am going to tell you about the *repro-*

ductive instinct in human beings, and about the organs that have been given to them for the renewal of life. I want you to understand the subject thoroughly in order that you may know how to choose in a way that will bring great good and blessing both to yourself and to those around you. Then when you do know, I believe you will use your will and choose the best, so that you will grow strong and beautiful in character.

Just the same as in the flowers and the animals we have been learning about, so too within the body of every baby that is born into the world are tiny half-lives. These half-lives have the same names as the half-lives of the flowers and the bees and the birds. The male half-lives are called sperms, and the female half-lives are called ova. The life of the human being begins just the same as the life of the plant and the life of the animal; by means of the coming together of the two half-lives.

The higher we go in animal life, the fewer young are born, and the greater care and protection are needed so that they may live and

grow up like their parents. We saw how the tiny life of the bird was tucked away inside the shell and surrounded by just the right material to develop into a baby bird. We also saw how it was necessary for the two half-lives to come together before the hard shell formed. As human life is much higher and more important than the life of the birds, and fewer young are born, so they need still greater care in order that they may live. Therefore human life must have better protection than that of the bird during the process of development, before it is exposed to danger. So the little human baby grows and develops in a very wonderful nest, safe and warm inside the body of the mother. This is the case also with the higher animals, such as the dog, the cat, the horse, and the cow.

Of all the wonderful organs of the human body, the reproductive organs, or those that have to do with the reproduction and development of the new little life are, in some respects, the most wonderful. These organs in a girl are sometimes called the maternal organs, because by means of them she is able

to become a mother. Every girl should understand about her maternal organs in order that she may give them the proper care and attention.

On each side, low down within the abdominal cavity, is a small oblong body much the shape and size of an almond. These are called ovaries, for they contain the ova or eggs, or, as I like to call them, the female half-lives. The ova stay quietly asleep in the ovaries all the time while a girl is growing from a baby to a child, and from a child into a little woman. While here, they are kept alive by the blood of the girl with whom they live. The life of the girl helps to determine what their future lives will be. If she is strong, and healthy, and true, she will be glad to have them take after her; but if she is sickly, or does anything to harm her body, the poor little half-lives may have a sad start in the world.

The ovaries are connected by two narrow tubes with the womb, or uterus, which is located low down in the center of the abdomen. In speaking of this organ, sometimes the word

womb is used, and sometimes uterus, so it is well to know both. The uterus is a somewhat pear-shaped organ about two and a half inches long, set with the large end up. Only instead of being perfectly round, it is flattened from front to back. It has a small opening in the middle. The two small tubes that connect with the ovaries lead from the top of the uterus; one from each side. Leading from the lower end of the uterus is a large tube or passage-way called the vagina which opens on the outside in the center of the body, between the opening of the bladder in front, and the opening of the rectum behind. The whole is lined with what is called mucous membrane like the lining of the mouth.

Now that you have an idea what it is like, let's go back and see what this wonderful organ can do. It is really more marvellous than a fairy tale. The half-lives live in the two ovaries just the same as they do in the flowers. Here they stay quietly asleep until a girl begins to change to a woman; then once in every four weeks, one, or occasionally more, of the tiny eggs travels

down the tube to the womb. They are then 1/125 of an inch across; so small indeed, that the aid of a microscope is necessary in order to see them. Usually these little half-lives are lost; but if one meets the sperm, or male half-life, before leaving the womb, and unites with it, from that moment the baby begins its life. Now you might think a fairy must be around, such wonderful things begin to happen. When the tiny half-life meets the other half-life and the life of the baby begins, the womb is only about two and a half inches long on the outside, but very, very much smaller on the inside, because it has thick walls. But as soon as the baby begins to grow, the womb begins to grow too, growing just as fast as necessary so the little thing will have plenty of room.

When the two half-lives come together, they form a tiny round cell; still so small you must use your microscope in order to see it. This cell divides into two cells, and then into four, and so on, growing all the time, until before long, there is a whole mass of little round cells lying close together. After a while this

mass of cells stretches out and grows longer until it gradually takes on the human form.

The baby is dependent on its mother for everything while it is growing and developing in its wonderful nest. When it starts life, it clings to one side of the womb. The lining of the womb swells up about the little helpless thing. Before long the embryo is surrounded with a soft, protecting membrane like a blanket; a most wonderful blanket. It not only grows the same as the baby life grows, and the womb grows, but it is filled with blood vessels which take the material that is needed from the mother's blood straight to the helpless little life. From the mother's blood the baby obtains everything that is needed to make muscles and bone and skin and organs. Not only that, but there is formed about the embryo a sort of bag filled with water which acts as a cushion to protect the tender, helpless little thing from injury.

When the embryo is three months old, it is still very tiny, but it begins to look like a human being. About four and a half months

after the baby has started life, it is able to move and stretch a little. Then the mother is said to feel life, although, of course, life has been there from the very beginning. After it has lain for nine months close to its mother's heart, the baby is fully developed and is ready to begin life in the outer world. The position of the baby at this time is with its head downward, at the entrance to the passage-way, its little arms folded across its breast, and its legs drawn up against its body.

When it is time for the baby to be born, the passage-way leading to the outside stretches and stretches, which it can very well do, for it is not made of smooth skin, but of soft folds which can be spread out. The muscles of the mother's womb draw together. They are very strong and force the infant downward. After several hours' labour, it comes out head first through the vagina, or as we say, is born. It is still fastened to the mother by a long tube or cord which is attached at one end to the navel of the child, and at the other to the blanket still in the mother's womb. It is through this hollow

cord that the blood has flowed from the blanket to the growing embryo. Soon after the baby has begun to breathe and cry, the doctor or nurse cuts the cord from one to two inches from the body of the infant, first tying it with a piece of fine tape so it won't bleed. Then the baby begins life in the outer world.

Now the baby is oiled all over its body, wrapped in a soft warm blanket that has been prepared for it, and laid one side in a warm place to rest while the doctor tends to the mother. It used to be the custom to bathe and dress the baby as soon as it was born, but doctors now see that since the baby has had a hard time coming into the world, it is better to allow it to rest a few hours before disturbing it any more.

About twenty minutes or half an hour after the baby is born, the muscles of the womb again pull strongly together and force out the blanket, or after-birth, as it is now called. The doctor always stays until this has come. It is very necessary that it should be completely removed; for it is no longer of any

use, and if left in the body, would cause great inflammation and trouble.

The mother is now bound up snugly. She is given something warm to drink, and made to rest quietly. The womb has grown very large and extended beyond its regular place in order to hold a baby floating in a bag of water all wrapped in a blanket. A woman should stay in bed at least two weeks, and then move about quietly for a few weeks longer, in order to give this organ an opportunity to go back into place.

After the baby is born, it seems as if the fairy must be around again, for now the womb begins to shrink. It becomes smaller and smaller, until after a few months, it is only slightly larger than it was before the baby's life began.

Just here I want to remind you of something that many people do not seem to realize, and that is that the little baby begins its life when the two half-lives come together, and from that moment its life is sacred. It should be protected and shielded from harm just as carefully as it is after it is born and living in

the outer world. It is wrong to do anything to injure or deprive a baby of its life while it is still in its mother's womb, just the same as it is after the child is born. Remember human life is sacred, always, no matter at what stage of development it may be, and should be given every chance to live and obtain what it needs for its growth.

A human baby is very helpless and dependent; far more so than babies of any of the animals, and for a much longer time. Little chicks begin to pick up food soon after they come out of the shell, and I have seen a baby calf walk about before it was a day old; but human babies must be cared for for a long time. As you know, food of the right kind, pure and warm, of the proper strength, and of the quantity it needs, is supplied for the infant in the breasts of the mother. As the baby grows bigger and stronger, the milk is suited to its needs, becoming richer and more plentiful. When the baby is about nine months old, he should be given a little weak cow's milk every day; for soon his mother's milk will grow less. Gradually the amount

of cow's milk should be increased, until by the time he is a year old, he should be weaned from the mother altogether.

There are two reasons why every mother should nurse her own baby if it is possible. In the first place, the human milk is just suited to a baby's need and can never be equalled by any other food. A cow's milk is intended for a calf and not for a little baby, so it must have water and other things added to it before it can be given to an infant. Sometimes it is very hard to find a food that will just suit a baby. Even when that is done, the milk may get sour, or chilled, or have germs in it, thus causing the baby to become sick. It is much harder to raise a baby on the bottle than it is on the breast. Doctors have found that many more babies die among those brought up on the bottle than among those that are nursed.

The second reason why a mother should want to nurse her own baby is that this act unites the two more closely in love. A little helpless baby, depending on her for its very life, draws out a mother's love towards the child, and the love of the baby for its mother,

in a stronger, deeper way than is produced by raising a child on a bottle; for this can be done by another as well as by the mother.

Now that I have told about the way in which the baby begins life, I want to talk some more about the wonderful organs where the half-lives live, and the organ where the baby stays while it is developing into a perfect form.

After the little baby has been in the mother's womb for nine months, it is perfectly formed and ready to begin life in the outer world. Its heart beats, its lungs draw the breath in and out, and its stomach digests the milk. All the organs are ready to work except the reproductive organs, which exist for the purpose of reproducing life. These organs are in some ways the most remarkable organs of the body. All of the other organs work right along from birth to death, but these organs do their work in the best years of life; for in childhood, and again when past middle age, they remain quiet and rest. What is still more remarkable, if they are in a healthy state, they are ready to do their work

whenever they are called upon, and if not used, they keep perfectly healthy and do not lose any of their powers.

But before children have begun to grow into men and women, the reproductive organs are small and undeveloped, and the half-lives within them are still asleep. They stay this way until the girl is about twelve or fourteen years of age, and the boy thirteen to sixteen; then they begin to grow and develop. The boy's voice gets deeper, and the girl's breasts begin to increase in size. Strange to say, the boys and girls change very much in nature just at this time. They lose interest in childish things and begin to feel more grown up. A boy is very much afraid of being babied; he wants to appear manly, while a girl lays aside her dolls, and thinks much more about her personal appearance than she ever did before. It is at this time that once in every four weeks a tiny half-life leaves the ovary and travels down the tube to the womb. The womb is always prepared to receive its guest. That it may not suffer want, it has stored up blood ready to feed the tiny help-

less thing. If the half-life is lost, the blood waiting in readiness for it has become useless; so the womb throws it off, and it passes down through the passage-way. Then we say the girl menstruates, or has her monthly flow. This lasts from three to five days, after which the womb is quite empty. Then it begins all over again, filling its walls with fresh blood, so as to be in readiness when the next half-life stops a few days on its way.

Many people think that this blood is impure, but that is an entirely mistaken idea. It is perfectly pure blood collected for the purpose of nourishing and building up the new little life. If not needed for that purpose, it is thrown off, together with the lining membrane of the womb; so that each month there may be a fresh supply of blood, and a new soft lining to the nest, in case it should be needed.

Most women do not menstruate at all while the little life is developing within the womb, neither do they menstruate while they are nursing the baby. The blood, which at other times is not needed, at these times is used

either directly to nourish the little life before it has come into the outer world, or it goes to make milk to feed the helpless infant while it is still too young to eat.

A girl should always be especially careful of her maternal organs, even more so than she is of her other organs. Young people are often told not to strain their eyes, and not to eat things that will upset their stomachs. That is very true, but if they do not obey, they are the ones that have to suffer. But if a girl does not care for her maternal organs as she should, not only will she suffer, but she can never tell what harm she is storing up for the little children who may some day come to her.

There are two ways in which you should protect your maternal organs all the time. One is to give them plenty of room, and not squeeze them out of place with tight clothing. The other way you should protect them is to think of them always as the most sacred part of your body, to be shielded, and guarded, and never touched in any way except for purposes of cleanliness.

There are two times when they need special care. One is when there is growing within the new little life. Then she who is to become a mother should eat plenty of nourishing food, and breathe fresh air, and be careful not to get fatigued, so that her little one may get good rich blood to build with and grow strong in body. Also she should try to keep her thoughts pure and sweet and happy, so that her child may have every chance she can give it to start well in life. An expectant mother should keep constantly in mind that it is upon her life-blood that the little helpless embryo is dependent; and whatever affects her blood for good or for harm is going to have its effect upon her unborn child.

The other time when the maternal organs need special care is during menstruation; when the blood that is no longer needed is being thrown off. Although a girl should feel no differently at this time than at any other, as a matter of fact, many girls suffer pain or feel miserable in other ways. If possible, walk less and rest more. Always be sure to keep your feet warm and dry. Be careful not to

get wet or catch cold; otherwise the flow may stop and cause injury to the organ. A girl should never go in bathing or use cold water on her body at this time; for as you know, cold water stops the flow of blood. But warm water and soap should be used at least once a day during the time of the menstrual flow for the purpose of cleansing the entrance to the organs. This is of benefit to the health as well as being quite necessary to comfort.

It is important to keep the bowels well emptied at all times, but particularly so just before and during the period of menstruation. Often pain is caused by the lower bowel being packed and pressed against the womb at this time when it is in a sensitive state.

Violent exercise should never be taken either, during the menstrual period. Very often girls do things that they know are wrong and excuse themselves by saying it never hurts them. Perhaps it does not show any harmful effects at the time, but only too often a girl has had to pay for her rashness later on, either in suffering to herself, or in the difficulties she meets when she is about to be-

come a mother. A girl who takes care of herself at the time of her monthly flow is much more likely to be well and keep well when she becomes a mother than one who is rash or foolish.

If you will always remember the reason for the menstrual flow, I think you will not consider it such a nuisance, but will try to care for yourself as you should at that time. You will not do anything which might injure the delicate organs, and bring trouble not only on yourself, but also on the little lives which may some day grow and develop within their shelter.

While the baby is still in its mother's womb, and for a long time after it is born, it is very dependent on her for its food and care. The human baby is more dependent than the young of any animal, for an infant cannot do for itself at all, and will very soon die unless the mother or someone else tends to its wants. That is one of the reasons why mothers love their little babies so; because they are so helpless and dependent on them.

As soon as the baby leaves its mother's

womb and comes into the outer world, it receives the second gift, *instinct.* It is *instinct* that teaches the baby how to suck, and makes it cry when it is hungry, or in pain, and causes it to move its arms and legs about. Later on, instinct prompts it to walk, and to do other things characteristic of its kind.

It is not until the baby is able to understand that he is given the finest gift of all, *choice.* It takes much time and training for the child to learn to use his third and best gift. In fact, all life is an opportunity for the use of this great gift, *choice.*

In order to prove that human life was intended to be governed by the reason and the will instead of by instinct, just think for a minute how much more perfect an animal's instinct is than a baby's, and how instinct protects the animal from harm, but does not protect the baby. If you have an open fire in a room, you must watch a young child that is just learning to creep or walk; for if you don't, he will be attracted by its brightness and may go so close as to get burned; whereas a kitten or a puppy will sniff and keep at a

safe distance. A baby, too, has to be watched that he does not tumble down the stairs, or climb onto a chair near a window and fall out, or hurt himself in some other way. But the young of animals are made cautious and kept from harm by their instinct.

A young child must be kept from danger by an older person while he is too young to understand; then he must learn, little by little, how to use his reason and his will, so as to know for himself what is good and what will do him harm. Children are sent to school to learn how to think; but more important still, both at home and at school, they should be taught the use of their wills to control their actions.

It is an interesting fact that the *reproductive instinct,* which of all the instincts in the human being can least be depended upon to act as a guide, and which needs most of all to be directed and controlled by the reason and the will, does not make itself felt until the child has had time to practise the use of the reason and the will in other parts of his life.

The time when the *reproductive instinct*

first begins to make itself felt, in the early teens, is the most important and critical time in a boy's or girl's life; for the choices that are made, and the habits that are formed at that time, will have an important influence on the whole of the after life.

We cannot have the great virtues in life unless we are free. We can never be true or noble or pure were it not possible to be untrue and low and impure. It is a great gift that has been given to the human being, this gift of *choice,* with which to shape his life. Let us all strive to use it in the best and highest way in order that we may obey the law of life and progress!

CHAPTER IV

THE GIFT OF CHOICE

CHOICE is such a wonderful gift, and can be made of such great value to the human being if used in the best and wisest way, that it is important for everyone to be taught its use so that he may progress and get the most out of life. *Choice* concerns every part of life, but I am going to speak only of those choices that are in some way concerned with the *reproductive instinct;* for in both animal and human life the reproductive instinct is, in some respects, the most important instinct there is. The other instincts affect the individual, while the reproductive instinct concerns not only the individual, but also future generations.

In animal life, this instinct has become so perfect that it may truly be called the *race instinct,* because it makes animals do those things that are for the well-being of their species; even to sacrificing their own lives, if necessary, in order that their young may live.

But in human beings, instinct cannot be depended upon as a guide, because there is a gift that is better; and one that, if used rightly, will enable them to progress much farther than is possible in animal life. In human beings too, the reproductive instinct can be made into a *race instinct* by means of the gift *choice,* to the benefit both of the individual and of the race as a whole.

Choice always involves two things, knowledge or understanding, and determination or will. First then you must know about the reproductive instinct; what it is, how the uncontrolled instinct brings ruin to human beings, and how the same instinct when controlled by the gift *choice* can be made into the greatest blessing; then you must know how to use your will so as to make the reproductive instinct a real *race instinct;* one that will make for progress and well-being both of individuals and of the race.

When the reproductive organs of the boy or girl begin to grow and develop between the ages of twelve and fifteen, the nature of the boy and girl changes too. They are then

passing from childhood into young manhood or womanhood. They become interested in each other in quite a different way from what they were before. Now this is perfectly natural and quite as it should be, if the young people choose to act in the right way; for if they always remained indifferent to each other as they did when they were children, they would not think of marrying and starting a new home, no children would be born, and the race would not continue.

It is the reproductive instinct which makes young people of the opposite sex attracted to each other as they grow into men and women, and later makes them marry and become fathers and mothers. It is the same instinct which made the salmon swim hundreds of miles to reach their breeding-places. It sent the queen bee on her mad flight into the air followed by the drones, and it urged the birds north, singing as they came, to build their nests and breed their young in the place where they were born. This instinct in the human being is right and good *only* if it is governed by *choice;* for then it grows finer and finer un-

til it develops into pure love, which is the greatest thing in the world. But if it is allowed to rule blindly, it degenerates into uncontrolled passion; the lowest and basest thing in man, which sinks him far lower than the animals.

The reproductive instinct varies greatly between the two sexes and in different individuals of the same sex. In some it is much stronger than it is in others. It also shows itself in many different ways, so that it is impossible to describe this instinct in any definite manner. But in the majority of cases, the reproductive instinct in the unmarried girl or woman expresses itself in a different way from the same instinct in the boy or man. The reproductive instinct in the girl often shows itself most strongly in her desire to mother that which is weak and needing protection and help, especially little children. I think this is its most beautiful form. Then too, this instinct makes her long for companionship, affection and love. It makes her like to be admired and shown attention. It also creates in her the desire to have a home

and children of her own. We might say, that in the majority of cases, a girl's reproductive instinct is more indirect than a man's, expressing itself in many different ways. But the reproductive instinct of the boy or man is very direct and easily aroused. This feeling is spoken of as passion. In most cases, a man must struggle much harder than a girl in order to keep it in control. When a girl allows a man to put his arm around her, or hold her hand, or kiss her, very often it means no more to her than just the pleasure of being fondled and petted. But with the man it is quite different. The pressure of the girl's body against his arm, or the touch of her hand or lips arouses his passion just as the sight of the queen bee soaring up towards heaven stirred a similar feeling in all the drones flying lazily about in the sunshine. Oftentimes this passion is very hard to control, and unless a man fights hard to choose wisely, it will gain control over him and lead him to actions which degrade rather than uplift both himself and others.

Because a man's reproductive instinct is so

much more direct than a woman's, don't you see that a woman should not try to provoke it in any way? For if she does, a man may forget entirely his great power to choose, and allow his instinct, uncontrolled by reason or choice, to drive him lower and lower until he is ruled by his baser passion.

Many a girl who would not allow a man to kiss her or put his arm about her, nevertheless arouses his passion just as strongly in quite another way. That is by making eyes and flirting; by those little coy actions which seem to say "Catch me if you can." Probably most girls who enjoy "keeping a man on the string," as they call it, or who boast of the number of proposals they have had, would never act as they do if they knew how hard they were making it for the man to keep his purity and nobility.

One other way in which girls excite a man's feelings and tempt him to degrade himself is by immodest and suggestive dressing and actions. Unfortunately, many girls have never been taught the importance of right conduct and dress; nor what it is that makes

certain actions coarse and vulgar. It is right for a girl to make herself look attractive by dressing becomingly and neatly; but that is an entirely different thing from dressing in an extreme way so as to call attention to her figure. It should be the girl herself, her personality, that one notices first and not the fantastic appearance of her body.

The same thing is true in regard to actions. The real charm in a woman lies largely in her manner. It is only men of the lower type that are attracted to a girl who flaunts herself about, and by her actions, calls attention to any part of her body. The better class of men always admire and respect a girl whose dress and actions show an inner refinement and good breeding.

Many girls act in a vulgar way largely from example, and quite unconscious of what they are doing. I think the greatest danger here lies in dancing. This can be made a pleasant, harmless, and wholesome amusement; or it can be the means of exciting a man's passion in a most dangerous way. It lies largely with the women and girls to de-

termine which it shall be. If you allow a man to hold you pressed closely to him, or if you dance the slow half-time waltz, you will be pretty sure to arouse these feelings in him. There are too, certain motions and twistings of the body which some low-minded people have introduced into the dance-halls. Many times a girl is tempted to imitate this style of dancing just for fun, absolutely ignorant that these movements are a direct appeal to a man's physical nature, and one of the surest means of arousing his passion.

Just as the little birds in the spring stir up a warmth and responsive feeling in the breast of the mate they are courting by their coy flirting ways, so girls, perhaps quite unconsciously, excite a similar feeling in the man with whom they flirt or dance or act in the wrong way. Very often the girl who arouses a man's passion in this way is quite ignorant of what she has done, or of the fact that on leaving her, he will be tempted to relieve his feelings by degrading some other, some weaker girl.

When the time comes for a girl to go out

in the world and earn her living, she is pretty sure to meet all kinds of people. It is well, therefore, for her to understand about life so that she may protect herself against its dangers. For although everyone has been given the gift of *choice,* there are some who prefer to let *instinct* rule their lives. These people are always selfish, caring for nothing but that which will bring them pleasure or money.

There are some men who seek only their own physical pleasure, no matter what misery or shame they may bring to others. These men are to be found in all walks of life. Sometimes it is the man with whom a girl keeps company, or one whom she meets in social gatherings. Sometimes he is a fellow-workman, or the foreman over her, or even her employer. He will offer all sorts of inducements in order to get the girl to yield herself to him. Such a man will often begin in a harmless, friendly sort of way if he sees the girl is innocent and not suspicious. He will send little gifts and invite her out and spend money for her pleasure. It is not until he

has won her confidence, or perhaps her love, that he suggests anything wrong. Then he will plead his love for her and try to get her to yield to him under promise of marriage. Such a man does not know the meaning of the word *love*. True love is unselfish, *always*, gladly sacrificing itself, if need be, for the object of its love. A man who truly loves a girl always wants her to keep her purity, and will never sacrifice that to his pleasure. What is more, when a man has induced a girl to yield herself to him under the pretence of love or the promise of marriage, more often than not he will later refuse to marry her and will seek a girl whose honour is unstained.

It is a good rule never to accept presents from any man unless you are engaged to be married to him. Although there is many a pure and good man who will take a girl to the theatre or some other place of amusement with no other thought than the pleasure of her company, unfortunately there are others who sooner or later expect a return for the money they have spent; so that a girl should always know a man well before she goes out

with him, and should then refuse to go again if his conduct is not that of a gentleman.

There is a second class for which you must look out. It is composed of both men and women; sometimes even of boys and girls. They are called procurers. To my mind, they are worse than thieves and murderers. They do not steal a girl's money, but they steal her virtue, which is of infinitely greater value. They may not kill her body, but they poison her soul. These procurers induce a girl to go with them by all sorts of promises of an easy position with big pay, or a good time. Then they sell her to some man for his base purpose. Procurers are to be found everywhere, and you must be ever on your guard. They go to dance-halls, moving picture shows, amusement parks, and other places of amusement; and are ready to make a girl have a good time. They find their way into stores and factories, holding out tempting offers of easy work and high wages. Frequently they make out that they represent some theatrical company, and try to induce girls to leave home in order to go on the stage. They

meet the trains in our large railway-stations and offer to show strangers to a nice boarding-place. They are friendly to the girl living in a boarding or furnished-room house; and are always on the lookout for those who are ready for a good time or are ignorant of the dangers of a great city.

Be careful of the acquaintances you make in places of amusement. Never, under any circumstances, go off with a stranger. Be suspicious of work which is easy and offers big pay; it is usually only a trap for the innocent. Do not be too intimate with people with whom you board or near whom you live until you are sure they are of the right sort. If you are doubtful about any of these things, be on the safe side and keep by yourself or with friends whom you know. Never take an automobile ride with a stranger who stops on the street and invites you into his car. He does not do it just to give you pleasure; he will be sure to demand his pay. Do not allow a stranger to treat you to a drink, even if it is not liquor and is quite harmless in itself. Many cases have been known where a

man drugged a girl in this way and got her completely under his control. When you are answering advertisements and looking for work, bear these things always in mind and avoid any place of which you are the least suspicious. Never, under any circumstances, allow your employer or any other man to take any liberty with you. Remember if he respects you he won't do it; much less if he cares for you in the right way.

Not only must you understand the reproductive instinct and how it can be guided and controlled, but you must know the importance of guarding this gift of choice so that you may never be deprived of its use, even for a short time.

You have often heard it said that liquor is one of the greatest enemies of the human race, but I wonder if you have ever thought just what liquor does. It takes away the power of choosing altogether. It both robs the drinker of his ability to reason, and it takes away his will power. A person need not be drunk; he may take only a little, just enough to excite him; but when in this state

he cannot reason clearly, and his actions will be governed either by his uncontrolled instinct, or they will depend upon what his companions tell him to do.

What is more, alcohol promotes immorality; for it not only takes away a person's power of control, but it excites and inflames his passion. Don't touch it at all, and don't go with a man who drinks. That is the safest way, for then you will not expose yourself to danger.

Alcohol is taken into the blood within a very few minutes after it reaches the stomach. Doctors have learned by experiment that alcohol in the blood, even in small quantities, interferes with the building up of new tissue in the body. If liquor is used by the woman who is going to become a mother, this poison is carried through her blood to the little growing embryo. As a result, the child is so weakened through lack of the proper nourishment that it is sometimes born dead. If alive, he may be more or less deformed, or weak, either in body or mind; all because his mother's blood was robbed of its life-giving

qualities so necessary for the proper growth of the little embryo.

Some doctors, after careful study, have come to the conclusion that alcohol has a directly weakening effect upon the half-lives of the man or woman taking it. Alcohol is particularly harmful to the brain and nervous system, so that the children of parents who drink are very often afflicted with epilepsy, or are born idiots, or feeble-minded, or just dull. Children of such parents are apt to be weak in will power and easily led astray, later becoming drunkards or even criminals. This has been proven by examining the children in asylums for idiots and the feeble-minded, and also in reformatories. It has been found by investigation that a very large number of these poor unfortunates were born of drinking parents and thus made the victims of that dreadful poison.

The destruction of the mind and the will, resulting in idiots or criminals, is the most dreadful result of alcohol; but this is not nearly so common a result as just dulness. One doctor in New York made a study not

long ago to find out how much effect alcohol has upon the children of those who drink. He examined 3700 school children, inquiring into the habits of both the parents and the grandparents in regard to taking intoxicating drinks. He learned that of those children who came from homes where no liquor was taken by either the parents or the grandparents, only very few were considered dull or backward in school, whereas the majority of children who had difficulty in keeping up with their classes came from homes where at least one member of the family, either parent or grandparent, had the drink habit.

Doctors have used alcohol in one form or another as a medicine; but in recent years, many of the more learned doctors are using it less and less, while some will not give it at all. When people come to understand and value the great gift of *choice,* they will never touch a poison that will cause them to lose this gift; or more dreadful still, rob their helpless, innocent children of the full powers that should belong to them.

In the human being, all the instincts are in-

tended to be under the guidance and control of the reason and the will, but this is particularly true in the case of the reproductive instinct. Those people who allow this instinct to rule them always become poor and weak in character, and often suffer pain and weakness in their bodies too.

It seems to be Nature's way of working to change the greatest blessings, when wrongly used, into the greatest curses. Just think what a necessity water is! We could not exist without it for very long; and yet water can drown. Fire, too, is an excellent servant but a most terrible master. The same thing is true with respect to the organs of reproduction. If used for the purpose for which they were intended, they bring the greatest blessings. But if they are put to wrong uses or abused, severe punishment follows.

Two diseases are the consequences of wrong-doing. They are both germ diseases and are passed directly from one person to another, either through immoral living, or in marriage with a person who has the disease.

These diseases are also contracted, although much less frequently, through the common drinking cup or towels, or by using the public toilet seat; or perhaps more often, by kissing. Cases have been known where a man infected his mother and sisters through the kiss, or an innocent girl contracted the disease by allowing a young man to kiss her, either in private, or in a kissing game. So you see that aside from the moral effect, kissing has its dangers on the side of health too.

One of these diseases, which is called gonorrhea, causes an inflammation and discharge in the reproductive organs. It is especially harmful in the delicate maternal organs. Sometimes this condition extends to the ovaries and creates so much disturbance there that the girl can never become a mother; or perhaps, if the trouble has started after the little life has begun, she may have one child but may never have another. So also in the male organs of reproduction it may do great damage; sometimes preventing a man from ever becoming a father. It has been found that in more than half

of the marriages where a child is wanted but the longing is unsatisfied, the cause can be traced to the presence of this disease. If the discharge gets into the baby's eyes as the helpless little thing is passing out into the world, it may cause it to become blind. Almost all of the blindness of new-born infants is due to this infection. Often it causes so much inflammation and pain that a woman is compelled to undergo an operation and have part or all of her maternal organs removed.

The other disease, which is known as syphilis, is not confined to any one part of the body, but spreads all through the blood. It may attack any organ and bring misery in its train. Sometimes it even sends its poison into the brain, causing insanity. Syphilis is a most terrible murderer of children, for in a more certain and direct way than any other disease, it attacks the half-lives of those who are suffering from it and is passed on to the children. If the mother has this disease, the germs may be carried through her blood direct to the growing embryo. Very often syphilis

causes the embryo to die before it is fully developed. If the baby is born alive, it is frequently deformed in some way, or an idiot, or so delicate it lives only a short time, or if it does grow up, it may be compelled to live without its full share of health and vigour.

Both these diseases, although so terrible in their results, can be greatly relieved and their evil consequences lessened if they are taken in time and treated by a regular physician in good standing. Some doctors, who are called quacks, advertise wonderful cures which they cannot perform. Often they do more harm than good, and are usually after the money they can make. For those who cannot afford a private physician, there are always good clinics, especially in our large cities, where patients can get proper treatment for a very small sum. If those who are suffering, either through wrong conduct or innocently in marriage, would take proper treatment, the suffering both to themselves and to others could be greatly reduced.

I am telling you these things not to frighten you, but only to show you how strictly the law

of life works, especially in human beings. If they do not use their gift of *choice* so as to progress, both they and their children must suffer the terrible consequences, even to losing life itself.

As you have just seen, the reproductive instinct, when uncontrolled, brings ruin and degradation to the body. Now let us see how the same instinct, when governed by the gift, *choice,* can help make both individuals and the race to progress, and so become a real *race instinct.* There are four different occasions when this instinct, if guided in the right way, can be made into a *race instinct.* The first is in association with the opposite sex in every day life, the second in choice of a partner in marriage, the third in motherhood, and the last in uplifting the whole human race.

Nature intended boys and girls, men and women, to be in each other's company; it is unnatural for them to be kept entirely apart. The important thing is that when together each draws out the best that is in the other's nature. Human beings have three sides to their natures; the physical, the mental and the

spiritual. When two people meet, they call out one side or the other. We are always influencing those with whom we associate, and being influenced by them, whether we know it or not.

Since Nature gave to human beings three sides, all three are good; for, in the right relation, whatever is from Nature is pure and right. In human beings, the mental and spiritual sides should be most prominent, because it is through these two that choice must do its work; while it is through the physical that instinct expresses itself. The physical side then, was intended to exist for the sake of the mental and spiritual, as a means of expression for them; if allowed to rule, it always degrades.

You know now how to keep from appealing to a man's physical nature, let us think for a moment what it means to draw out his better self. Women can have such a refining, uplifting influence on men, if they act in the right way and insist on men doing so too.

Men and women meet together constantly either for work or for pleasure, and this is

well; for they can enjoy their leisure more and do the work of the world better together than either sex could do entirely alone. The reason for this lies in the fact that the two sexes are slightly different; men are more developed on one side and women on another, so that together they balance each other and form the perfect whole. This is true both in their work and in their play.

There are many interesting things to talk about in life; both men and women can be benefited by seeing the other's point of view. There are innocent stories or jokes to tell, and games to play. There are beauties in Nature to see, and music to enjoy, and books to read together. But it is when men and women have high ideals in common, when they work together for some great reform, or for the uplifting both of their own characters and of humanity, that the greatest good is gained, both for themselves and for others.

Another time in which the reproductive instinct can be made into a race instinct, if directed right, is in the choice of a partner in marriage.

THE THREE GIFTS OF LIFE

Throughout all life, the mating of two individuals for the purpose of continuing life in the race is of the greatest importance. This has been brought about in different ways in the different forms of life, according to the gifts that they have received.

Plants have only one gift, *dependence.* It is with that gift that the mating of the best individuals is secured and plant life helped to progress.

Animals have a second gift, *instinct.* That instinct which has to do with the care and reproduction of the young I have called the *race instinct,* for it makes the animal do those things that are for the good of the race, rather than of the individual.

But human beings have been given three different gifts. They must use the third and best gift, *choice,* in the important matter of marriage if human life is to progress. Some people use the first gift, *dependence,* in selecting a mate. Some girls will marry a man, no matter what he is, so long as he has plenty of money. Others depend upon good looks, or social position, and will marry for that.

But such marriages rarely ever turn out happily and often end in divorce.

Then there is a much larger class of people that use their second gift, *instinct,* as a guide in marrying. A man and a woman are often attracted to each other physically. They feel a sort of fascination for each other. Then they say they are in love, and often marry without really knowing anything about the different sides of each other's natures. After they are married and cares begin to come, the mere physical attraction wears off. Only too often they wake up to find that they have nothing in common, and then they want to separate. Men who can be appealed to only on the physical side never make good husbands or fathers, and are often no better than brutes.

It is only those that use their third gift, *choice,* when taking a partner for life, who bring happiness to themselves and well-being to their children. For young people who use their gift of *choice* never marry until they have known each other long enough and well enough to be sure that they think alike on all the large, important things of life, and that

they are working towards the same ends and ideals.

Within recent years there has come into being a new science called *Eugenics* which is arousing much interest both in this country and in Europe. Just as Luther Burbank is working to improve plants by breeding, so those interested in Eugenics are working to improve the human race by proper selection in marriage.

Eugenics has two objects. First it would prevent certain classes from reproducing their kind. These would include the insane, the idiots, the feeble-minded, those afflicted with certain diseases, and also the confirmed criminals and drunkards. It would treat these people kindly while they live, but prevent them absolutely from handing down their afflictions to the next generation. In the second place, Eugenics would encourage the marriage of those who would make good parents and produce strong healthy children.

People interested in Eugenics are working in many different ways to accomplish these objects; but perhaps the best way of all is by

teaching young people the meaning of life and the importance of seeking the best both in themselves and in others; so that when a girl does fall in love and marry, it will be with one who is worthy of being both husband and father. Some people say that to use such care in marriage would be to take all the romance out of life, but that is not so at all; rather it would lift marriage to a higher plane, and with it the finer feelings of sentiment and love.

Girls speak of falling in love as if it were something over which they have no control; but they can control it in a certain way. You would not fall in love with a man who was unclean or repulsive in his person; your reason would not allow you to. Now you can so raise your ideals of what to demand in men, that it would be just as impossible to fall in love with a man who had unclean thoughts or low ideals, as it would be to love one who was repulsive looking or had disgusting habits.

To those women who want strong, healthy children, it is just as important that their husbands should be strong and clean and healthy

as it is to be so themselves. I have given the name *half-lives* to the sperms and the ova, because it is easy to remember that it takes two halves to make a whole. Each half is equally important, and gives equally of its characteristics, both physical and mental, whether for good or for evil, to the life of the offspring.

Some states have passed laws compelling a doctor's certificate to show freedom from certain diseases before issuing a marriage license. This is not the case in all states, but parents can always demand a clean bill of health before giving their consent to their daughter's marriage. In this way they may often save her much suffering afterwards, and also help to improve the human race.

Every normal girl loves children and looks forward to having little ones of her own some day; so she too will want to know that her husband has no disease which might afflict her children, or worse still, cut her off altogether from the joy of motherhood; the greatest blessing that can come to a woman.

Motherhood has been one of the most re-

fining and uplifting influences that mankind has known, and has greatly affected human progress. The animal mother cares for her young while they are weak and helpless, but as soon as they are grown and able to care for themselves, she pays no more attention to them. The human baby has a longer period of infancy and needs care for a much longer time than any animal does. This long period of sacrifice and care necessary to raise a little child has brought out so much of the mother's love and tenderness that it can never die out. History teaches us that from very early times the human mother loved her children even after they were fully grown. Gradually, this feeling of tenderness, this spirit of self-sacrifice, extended to others not her children but who were in need of love and care; until to-day, the spirit of motherhood broods over the whole human world. Some people think that motherhood is the best interpretation we have of the nature of God.

Motherhood at its best is like the freshly fallen snow in its wonder and beauty and pu-

rity; but motherhood degraded is like the same snow after it has been trampled by men and horses in a busy street. How important it is that we keep motherhood in the high place where it belongs, and never allow it to be associated with anything that is sinful and impure!

Unfortunately, many girls are denied the blessing of physical motherhood. While marriage is the normal life for a woman, it is better far to remain single than it is to marry some man who is unworthy of being a father. Happily, in human life, mother love can be satisfied in other ways than by having children of one's own to care for.

In speaking of the reproductive instinct in the animals, I called it the *race instinct;* because in animals that live in a wild state, this instinct exists for the benefit of the race rather than the individual. The reproductive instinct might be called the *race instinct* in human beings too, when it is guided and directed by the reason and the will; for people who rule their instincts take the big broad view of what is good for society as a whole, and never do anything which will bring injury and degra-

dation to others in order to give themselves a passing pleasure. Such people not only help the race to progress, but they progress themselves in the finest, deepest way; for they are growing strong and beautiful in character.

We all have certain impulses and desires and feelings that are closely connected with the organs of reproduction. These are given to us, and are intended for a blessing; but human beings can make of them either a blessing or a curse.

I am going to show you how this reproductive instinct can be directed by the reason and the will so as to be made a real *race instinct;* one which will make for the progress of the whole human race, as well as for every individual that understands and directs it in the highest way.

In every baby that is born into the world are glands containing half-lives; the male half-lives or sperms in the boy, and the female half-lives or ova in the girl. These half-lives are kept alive and nourished by the blood of the person with whom they live. But in return, the blood receives from these

glands some substance which has a marked effect upon the life of the individual. This is true in both the male and the female. It can be seen in the higher animals and the savages, but it grows more and more important the higher we go in civilised life. Perhaps I can explain what I mean by showing you the effect that these glands produce upon some of the animals.

When animals live in the wild state, they have to hunt for their food; therefore they are seldom either overfed or suffer from lack of exercise. But domestic animals have plenty to eat; while those that are not free to roam cannot work off their energy. Sometimes this unnatural way of living makes them so restless and savage that they are hard to manage and lose their usefulness to men. It is possible to change the nature of these animals by removing the glands containing the half-lives while they are still young. This is often done with the males of some animals in order to produce certain results. Calves, when so treated, instead of developing into bulls, so full of life and spirit that

they have to be kept chained by the nose for fear they will hurt someone, become patient stupid oxen, useful only as beasts of burden for drawing heavy loads. All the male horses that you see being driven along the streets have had their glands containing the half-lives removed when they were young; for if this had not been done, they would develop into stallions; magnificent animals, but so full of life and fire that only the most expert horsemen could manage them. This change of nature which is produced by removing the glands containing the half-lives proves that these glands give something to the blood which supplies the life and force and energy to the individual.

Now this same thing is true in the human being. The glands containing the half-lives both of the man and of the woman are of use in two ways. First they supply what is necessary for the continuation of life; that little children may be born. But they are of use in this way only a few times in the life of each person, and sometimes not at all; while in the second way they can be of use all the

time. For it is from these glands that the blood receives something which supplies much of the energy and power and force to life, and which helps to make the nature of the person, or what we call personality. It is this life force that goes toward making the manliness in men and the attractiveness in women.

In animal life, the surplus energy is worked off in a natural way; but in human beings it needs to be directed. This can be done because the feelings are expressed through the mind. Under the guidance of the reason and the power of the will, the life force can be directed into any channel the individual desires and be made to serve in the different activities of life. It is largely through the reproductive instinct, in one form or another, that the life force expresses itself.

There are three ways in which the reproductive instinct can be treated. First it can be allowed to rule. An individual can simply do whatever his instinct prompts. This is the course taken by many young people through ignorance; because they have not

known how to rule their lives by choice. But it leads to disaster and ruin; physical as well as moral. It is like a spring torrent dashing down the mountainside, sweeping away bridges and houses and everything else in its path. Those who follow their instinct, with no thought of directing or controlling it, are throwing away their power, allowing it to do harm where it might do good.

The second way to treat the reproductive instinct is to try to suppress it, to ignore it, to crowd it out of existence. When this is done, what happens is much the same as comes from damming up the water to form a pond without allowing for an outlet. The water becomes stale, and in time dries up altogether. If one's natural feelings, particularly the beautiful mother instinct, are not given any means of expression, then not only may this life force be of no use in bringing little ones into the world, but its value to the individual and to society is lessened also. Life with no outlet, suppressed and blocked up, grows dull and stale. Such people seem to shrivel up in nature. They neither get

much out of life for themselves, nor are they of any great value to others.

But there is a third way; to recognise and welcome this life force so as to make it a blessing instead of a curse; to direct and control the reproductive instinct so that it may do good instead of harm; that it may bring life to the individual and benefit to the race, thus becoming a true race instinct. Then the life force will be like a river flowing through its channel, watering the land along its banks, and turning the mill wheels on its course; a blessing to all with whom it comes in contact.

In women, the race instinct shows itself very often through the mother instinct. Those who cannot have children of their own, instead of trying to suppress their longings, or brooding over their loss, can direct this instinct and make it a force, a power for good. It is this very race instinct, directed and controlled, which has made some women so gentle as nurses, and some so patient as teachers, and others so strong and fearless when fighting some great wrong and protect-

ing the weak and helpless. Every woman should have some channel through which she can direct this mother instinct so that her life does not grow small and narrow. If she has children of her own, she has a great and wonderful opportunity for the use of all her powers; that of bringing her little ones up to noble manhood and womanhood. If she has not, she should seek some other outlet for this force; some way of using her mother instinct to help those weaker and more ignorant than herself; that her life force may be used both for the good of others and as a means of enlarging her own life.

The same thing is true with regard to men. It has been proved by experiment that men who live straight clean lives in early manhood, up to the time of marriage, gain strength and vigor for their own bodies from the life force which is given to the blood from the reproductive organs; so that when they marry, they are better able to give their children a good inheritance than those do who have been living a fast life.

In later life too, it is perfectly possible for

a man to remain single and lead a pure life. It is difficult for anyone to keep his actions pure, his body healthy, and his nerves strong and active, if he allows his thoughts to dwell constantly on his unsatisfied longings. But it is possible to live an active life, either physically or mentally, and use the life force in other parts of life by consciously directing the attention to something else. There have been many cases known to history of men who have been unmarried, but whose lives have been perfectly pure; men who have had some great purpose in life, and who have so directed their *race instinct* that they have turned it towards working out this purpose.

Men and women who so direct their *race instinct* as to make it of benefit to the race, are obeying the law of life in the very highest way, for they are doing consciously by their third gift what the animals did through instinct; they are caring more for the good of others than for their own pleasure. At the same time they are strengthening their own personality so that they are able to do ever greater and larger good. Someone has truly

said, "Personality is the highest form of force there is"; for there is no other power on earth that can accomplish such wonderful results as the power of a great personality.

You can see now the wonderful working of Nature. She has given us the gift *choice;* she has set heavy penalties for its wrong use; but she has rewarded its right use with the greatest blessings. Since this is the case, it is not only possible, but necessary, to the highest development of both men and women that they should live pure, clean lives.

For a long time society has demanded a high standard of purity for women; but it has excused immoral conduct in men. It has not frowned on what it called "just sowing wild oats." But now a change has come. We see the wrong and folly of what is known as a double standard of morals; "a golden standard for women and a leaden standard for men," as one man has called it. For the good of humanity there must be only one standard for all. What is wrong for a woman is equally wrong for a man. Men must come up to the high standard of per-

sonal purity that society demands of its women if the nation is to make any progress.

It is just as possible for a man's life to be pure as it is for a woman's. There are two things to prove this. In the first place, a man has been given the gift of choice with which to shape his life just the same as a woman. No man would ever say that his reason and his will power were inferior to those of a woman. In the second place, several different times noted doctors have come together to study this problem. Each time they have proved by experiment that unmarried men can and do live perfectly pure, clean lives by directing their thoughts to other things than just their physical longings, and that these men not only keep their health, but have better health than those do who are living in an immoral way.

It is largely through the women that this change from a double to a single standard is going to come. When women demand purity in men, men are going to give it. When a man knows that he cannot marry the girl of his choice after he has been leading a fast life,

he will be more careful of his conduct and will choose to live clean and pure. Women can do three things to help the race progress; seek the best in themselves, demand the best in men, and teach little children how to use their gift of choice.

There is one great path over which human life can progress; the path of the thoughts, and one great human power which can supply the force to send the thoughts in the desired direction; the power of the will. We are taught to look for help to a power higher than human, but this help can be obtained only through the coöperation of the human will.

Thoughts are the most important things in human life, because the way a person thinks determines what his life shall be. Thoughts come first, always, and then actions. You could never do an impure or unkind act if you never thought anything but pure and loving thoughts. On the other hand, it will be almost impossible to keep your actions pure and sweet if you allow impure or hateful thoughts to fill your mind. The things we think about have a very important effect upon our char-

acters. They can either build up into strong fine noble manhood or womanhood, or they can pull down to something pitifully low and degrading.

If you want to choose right and progress, be careful of the thoughts you entertain and of the different avenues through which they enter your mind. You would not put impure or unclean food into your stomach. Do not allow impure or unclean thoughts to enter your mind. It is far more important, because the effect lasts longer. If you eat bad food it may make you sick; but when you get over it in a few days, the stomach acts just the same as it did before. If you allow wrong thoughts to enter your mind, they make an impression which may be lasting.

In order to keep the thoughts on a high level, two things are necessary; first to keep out those thoughts that are impure and disagreeable and lowering; and second to feed the mind with good and uplifting thoughts.

Be careful of the companions you go with, the things you read, and the plays you see. Do not listen to coarse stories or jokes, or to

slander or mean gossip. Don't fill your mind with the scandals that are daily served up in the newspapers or go to see plays of a low moral character. Finally, be careful of your thoughts when they are free to roam. This is not easy, but by persistent practice, one's thoughts can be controlled to a large extent. Those who fight to win a hard thing and succeed, show their superiority over those who give up weakly without even trying. At the same time they are making it easier to overcome the next obstacle they meet.

There is only one way to keep out undesirable thoughts, and that is to put good ones in their place. Feed your mind with high uplifting thoughts. Many people keep their bodies well nourished, but their souls are so starved for lack of food, that they cannot grow, and as a result are small and undeveloped. Look for the beautiful things in life. Make it your business to read something good every day, if only a little, let it be good and let it sink deep into your mind so that you think about it. It is a very good habit to keep a small note book in which to

copy any beautiful bit of poetry or sentiment which happens to come your way. Carry this little book around in your hand bag. Then, any time when you are on a car, instead of reading the advertisements, take out the little book and commit something to memory. If you do this faithfully, after a while you will have a whole stock of ammunition with which to drive out evil thoughts or feelings, as well as material with which to build a beautiful palace for your soul to live in.

To come back now to what I said in the very beginning of my talks. The law of life is progress. That life which does not progress is punished; either by being cut off from the best things, or by having life itself taken away.

This is true of plant life, and animal life, and human life, but the law is most strict in human life because that is the highest life of all upon our earth, and has been given the most and the finest gifts.

The plants have only one gift, and that the simplest of all, *dependence,* but with it

they have made great progress and have grown strong and useful and beautiful. The animals have a second gift, *instinct;* which in the highest animals, has become so perfect that we cannot imagine how instinct could grow any finer or enable those animals to make any further progress.

Human beings have been given three gifts, the third one *choice,* the best of all. But human beings have not yet learned how to choose as they might. A few that have used this gift well, stand out as great men and women and are looked up to as heroes. Many do not know how to choose at all. Some do not even seem to know they can choose, but try to depend on their instincts as though they were still animals.

By looking back through history, we learn that the progress of the human race can be measured by the way that men and women have made use of *choice;* on the side of reason to develop their minds, and on the side of the will to develop their characters.

As we look forward, we do not yet know to what heights the human race will rise; but we

do know that when humanity learns to use reason as a guide, and develops the will power so as to make it a force for good, that both individuals and the race as a whole will be rewarded by gaining ever greater richness and fullness and power in life. We believe the promise is true. Those who use their gift of *choice* in the finest way and who overcome the temptations that come to them, shall receive for their reward the *Crown of Life*

THE END

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